

# **Hampton Roads Transit**



## **Transit Development Plan**

**FY 2012 through FY 2017**

**APPROVED AND ADOPTED BY THE TRANSIT DISTRICT COMMISSION  
OF HAMPTON ROADS**

**December 8, 2011**

## **5 OPERATING PLAN**

### **5.1 Introduction**

The previous chapters of the TDP described a range of service changes, service expansion projects, and capital projects that HRT could potentially implement over the six-year time horizon of the TDP. This chapter provides a more detailed operations plan for that period that is constrained based on reasonably expected revenues.

Given the funding structure of HRT and its dependency on contributions from its member municipalities, HRT reasonably expects that funding will only maintain pace with the cost of the current service level on a city-by-city basis. Thus the operations plan represents a reallocation of existing resources from relatively unproductive services to routes that will generate more ridership.

The service cuts that create the pool for reinvestment are derived primarily from the Service Efficiency Study (SE Study), though additional restructuring plans that involve reallocating resources were developed during the course of the TDP. Because all of the cuts from the SE Study are scheduled to take place within FY2012, all of the service reinvestments are also planned to happen during this first year of the TDP. The lack of expected new funding over the remaining years of the TDP means that no new service expansions can be undertaken unless some additional service cuts are made or additional revenues are generated or if a member city agrees to fund new service.

The summaries of future service, changes to service, and service reductions are presented following the text in a series of tables. For more detailed discussion of these changes, please refer to Chapters 3 and 4.

### **5.2 Future Fares**

The operating plan is contingent on having sufficient revenue to fund the service and associated capital investments. While the cuts from the Service Efficiency Study reduce the operating costs, the commensurate reinvestment of those cuts to improve service elsewhere keeps the costs level (but for inflation). However, while existing fare revenue will be sufficient for the first three years of the TDP (2012-2014), rising costs and a need to reduce the use of capital funds for operations necessitates that the TDP account for a fare increase in FY2015.

First, the agency is currently using close to the maximum allowable 80% of all preventive maintenance funds for operations. This use is not sustainable for several reasons, chief among them the prohibition of using more than 80% toward operating expenses. More importantly, however, is the fact that the more preventive maintenance money that is used for operations, the less that is available for its true intended purpose of keeping HRT's capital assets in good working order.

The second key driver for a fare increase is that fares have not kept pace with HRT's rising operating costs. Since FY 2006, the earliest date for which information is available, hourly operating costs for bus service have increased by 38%; fares have not increased since 1999.

Third, HRT has received CMAQ funding to help with the operations of feeder bus and The Tide operation. This funding of approximately \$3 million per year is available through FY 2014. After that time, other revenue sources will need to be used to fill that gap.

A 33% across-the-board fare increase, with the cash fare going to \$2.00 and all pass costs rising by 33%, would fill the gap left by the loss of CMAQ funds. Reducing the percentage of preventive maintenance funds being used for operations, an objective of HRT's, would have to be filled by other revenue increases, perhaps through advertising and Go-Pass sales. More detail on those potential new revenue sources are discussed in Chapter 7, the Financial Plan.

### **5.3 Transit Service Overview: Bus, Light Rail, and Ferry**

#### ***Service***

Table 5.1 presents a listing of all of the fixed route transit services that are projected to be operating during FY2017, the final year of the TDP. This table shows each route, the city or cities in which it operates, a summary of the span of service, and then a series of key statistics projected to the year 2017:

- Annual ridership
- Annual platform hours
- Riders per platform hour (productivity)
- Annual revenue miles
- Riders per revenue mile (productivity)
- Annual operating cost
- Annual fare revenue
- Status compared to 2011 operations
- Estimated change in riders compared to 2011

In addition to the service details by route for bus service, the overall statistics for light rail and ferry service are provided in Table 5.2.

#### ***Ridership***

Future ridership is based on a series of assumptions. An overall ridership growth rate of 1.5% per year is assumed systemwide; this figure is conservative based on the experience of the past five years but consistent with ridership growth over the last year. A fare increase of 33% is assumed to occur in 2015, and a drop in ridership of 7%<sup>1</sup> is assumed to take place as a result. Productivity is assumed to hold constant for routes that will see increases or decreases in service.

#### ***Operating Costs and Passenger Revenues***

Annual operating cost is shown in 2017 dollars in Table 5.1 and Table 5.2. The cost for an hour of service is assumed to increase 2.8% in the first year and 2.0% in each year thereafter. Fare revenue assumes that the average fare by route increases by 33% in 2015 because of the assumed fare increase. For new routes, the average fare from the most similar route was selected as the basis for the estimate of future revenue.

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<sup>1</sup> Based on an elasticity of -0.25 for transit dependent riders and calculating change using midpoint arc elasticity formula.

## **5.4 Service Changes**

Table 5.3 presents service expansions and reductions that are recommended to take place over the course of the TDP timeframe. As mentioned earlier, all of the changes possible under the constrained plan are recommended to happen during the first year. Other changes that are currently unfunded are described in Chapter 4.

The table lists the route number, name, and city or cities served. Then it provides a brief description of the service change and the net impact on operating cost in year 2012 dollars. The seventh column includes a reference to the objective from Chapter 2 that is supported by each service change. Finally, the last column describes the service issue identified in Chapter 3 that is at the basis for the proposed change. New routes that were developed in Chapter 4 were not analyzed in Chapter 3.

## **5.5 Service Reductions**

Table 5.4 highlights the service reductions in the TDP. The majority of these reductions are included in Table 5.3 and are reflected in the future costs and ridership of the services listed in Table 5.1. There are a few additional service reductions listed here, with potential implementation dates past 2012 that are contingent upon future analysis and the establishment of a new downtown transfer facility at Wood Street.

The reason for the service reduction is described in the fourth column, and the potential impact on the service area and communities is described in the sixth column. As can be seen, the vast majority of service reductions are derived from the Service Efficiency Study and are aimed at trips with low ridership.

## **5.6 Title VI/FTA Triennial review**

As shown in Chapter 3, no service changes are planned in response to the most recent Title VI Report and Triennial Review.



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Table 5.1 Recommended Fixed Route Bus Service Operations Plan - 2017

Route	Name	City(ies)	Service Days/Times	Annual Ridership (Est.)	Annual Platform Hours	Riders per Platform Hour	Annual Revenue Miles	Riders per Revenue Mile	Annual Operating Cost (Est.)	Annual Fare Revenue (Est)	New/Changed/ Existing	Estimated Change in Riders
Bus												
1	Granby St	Norfolk/VB	All	1,155,441	34,465	33.5	409,130	2.8	\$2,958,348	\$1,351,599	Changed	109,987
2	Hampton Blvd	Norfolk	All	259,560	15,728	16.5	195,992	1.3	\$1,350,053	\$293,747	Changed	-36,239
3	Chesapeake Blvd	Norfolk	All	702,214	29,422	23.9	295,208	2.4	\$2,525,521	\$855,215	Changed	-27,641
4	Church St	Norfolk	All	53,591	7,702	7.0	52,972	1.0	\$661,151	\$70,273	Changed	-9,217
5	Willoughby-Evelyn Butts	Norfolk	Mon-Sat	52,679	3,555	14.8	47,498	1.1	\$305,145	\$57,856	Changed	-6,418
6	South Norfolk/Robert Hall	Norfolk/Chesapeake	All	245,358	12,732	19.3	130,844	1.9	\$1,092,832	\$303,345	Changed	-48,620
8	Tidewater Drive	Norfolk	All	333,663	14,750	22.6	165,433	2.0	\$1,266,069	\$469,112	Changed	-188,943
9	Sewells Point	Norfolk	Mon-Sat	302,691	19,552	15.5	208,410	1.5	\$1,678,291	\$422,747	Changed	-19,137
11	Colonial Ave	Norfolk	All	81,164	7,725	10.5	40,357	2.0	\$663,068	\$141,521	Changed	-28,992
12	Indian River Rd	Norfolk/VB	Mon-Sat	179,379	10,065	17.8	143,169	1.3	\$863,972	\$224,882	Changed	40,988
13	Campostella	Norfolk/Chesapeake	All	375,178	14,309	26.2	130,572	2.9	\$1,228,206	\$390,301	Changed	-54,058
14	Battlefield Blvd	Chesapeake	Mon-Sat	132,211	10,989	12.0	141,624	0.9	\$943,239	\$214,397	Changed	21,633
15	Crosstown	Norfolk/Chesapeake	All	1,003,387	38,692	25.9	455,170	2.2	\$3,321,208	\$1,281,466	Changed	-255,136
16	Colley Ave	Norfolk	All	187,915	9,392	20.0	92,643	2.0	\$806,193	\$253,170	Existing	553
17	NET	Norfolk	All	341,572	12,773	26.7	118,865	2.9	\$1,096,393	\$59,766	Existing	1,005
18	Ballentine Blvd	Norfolk	Mon-Sat	95,497	8,680	11.0	102,020	0.9	\$745,101	\$154,315	Changed	36,496
20	Virginia Beach Boulevard	Norfolk/VB	All	1,415,374	52,995	26.7	591,876	2.4	\$4,548,941	\$1,835,156	Changed	-12,944
20L	Virginia Beach Boulevard	Virginia Beach	Weekday peak	194,602	9,108	21.4	125,083	1.6	\$781,801	\$252,319	New	194,602
21	Little Creek Rd	Norfolk	All	533,708	21,984	24.3	251,496	2.1	\$1,887,036	\$715,993	New	533,708
23	Princess Anne Rd	Norfolk	All	580,422	30,640	18.9	267,288	2.2	\$2,630,054	\$875,351	Changed	-3,511
25	Newtown Rd	Norfolk/VB	Weekday	107,176	8,349	12.8	106,103	1.0	\$716,675	\$185,932	Changed	-12,765
26	Bow Creek Blvd	Virginia Beach	Mon-Sat	60,720	4,357	13.9	64,509	0.9	\$373,962	\$46,225	Changed	-3,740
27	Northampton	Norfolk/VB	Mon-Sat	93,265	6,766	13.8	97,715	1.0	\$580,732	\$169,885	Changed	4,535
29	Great Neck	Virginia Beach	Mon-Sat	116,637	6,737	17.3	109,406	1.1	\$578,308	\$168,460	Changed	-6,546
30	Oceanfront Shuttle	Virginia Beach	All (Summer)	231,774	13,188	17.6	83,083	2.8	\$1,132,002	\$405,177	Changed	-61,887
31	Museum	Virginia Beach	All (Summer)	46,544	2,576	18.1	16,231	2.9	\$221,149	\$55,790	Changed	-49,817
32	Shoppers Shuttle	Virginia Beach	All (Summer)	36,803	2,304	16.0	14,514	2.5	\$197,751	\$44,679	Changed	-8,041
33	General Booth Blvd	Virginia Beach	Mon-Sat	131,426	9,030	14.6	140,051	0.9	\$775,143	\$218,157	Changed	-14,979
34	Rudee Inlet	Virginia Beach	All (Summer)	8,058	1,284	6.3	8,089	1.0	\$110,214	\$42,332	Existing	24
36	Holland Rd	Virginia Beach	Mon-Sat	319,969	13,120	24.4	159,276	2.0	\$1,126,158	\$363,152	Changed	159,838
41	Craddock	Portsmouth	Mon-Sat	121,655	8,030	15.2	101,180	1.2	\$689,242	\$144,231	Changed	-5,420
43	Parkview	Portsmouth	Mon-Sat	31,978	3,593	8.9	28,000	1.1	\$308,412	\$36,168	Existing	94
44	Midtown	Portsmouth	Mon-Sat	142,184	11,035	12.9	121,877	1.2	\$947,240	\$160,813	Existing	418
45	Portsmouth Blvd	Portsmouth	All	585,665	24,865	23.6	255,262	2.3	\$2,134,289	\$711,555	Changed	47,465
47	High Street	Portsmouth	Mon-Sat	263,470	11,127	23.7	128,704	2.0	\$955,106	\$284,569	Changed	-17,458
50	Academy Park	Portsmouth	Mon-Sat	80,665	4,017	20.1	41,955	1.9	\$344,828	\$86,053	Changed	-6,752
57	Deep Creek Blvd	Portsmouth	Mon-Sat	108,478	7,534	14.4	162,741	0.7	\$646,658	\$123,414	Changed	-4,088
58	Bainbridge Blvd	Portsmouth/Chesapeake	Mon-Sat	79,008	4,210	18.8	72,853	1.1	\$361,360	\$81,281	Existing	232
64	Smithfield	Hampton	Weekday peak	14,176	1,661	8.5	46,101	0.3	\$142,589	\$21,518	Changed	-6,901

Route	Name	City(ies)	Service Days/Times	Annual Ridership (Est.)	Annual Platform Hours	Riders per Platform Hour	Annual Revenue Miles	Riders per Revenue Mile	Annual Operating Cost (Est.)	Annual Fare Revenue (Est)	New/Changed/ Existing	Estimated Change in Riders
Bus												
101	Kecoughtan	Hampton/NN	All	356,629	11,276	31.6	153,216	2.3	\$967,854	\$437,997	Changed	-10,076
102	Queen Street	Hampton	All	173,786	13,743	12.6	170,675	1.0	\$1,179,619	\$201,048	Changed	95,793
103	Shell Rd	Hampton/NN	All	352,043	17,633	20.0	199,019	1.8	\$1,513,570	\$420,945	Changed	-10,131
104	Newsome Park	Newport News	All	331,903	17,036	19.5	197,119	1.7	\$1,462,355	\$366,142	Changed	977
105	Briarfield Rd	Hampton/NN	All	293,854	12,023	24.4	147,405	2.0	\$1,031,974	\$326,620	Changed	-18,310
106	Warwick Blvd	Newport News	All	872,193	28,950	30.1	461,915	1.9	\$2,484,989	\$991,783	Changed	336,102
108	Lee Hall	Newport News	All	148,200	6,478	22.9	106,153	1.4	\$556,051	\$177,018	New	148,200
110	Thomas Nelson CC	Hampton/NN	All	233,306	11,234	20.8	141,363	1.7	\$964,256	\$245,610	Changed	-274
111	Riverside	Hampton/NN	All	186,163	10,235	18.2	151,562	1.2	\$878,555	\$193,650	Changed	-47,332
112	Jefferson Ave	Newport News	All	677,744	22,055	30.7	323,262	2.1	\$1,893,107	\$774,941	Changed	-726
113	Fort Eustis	Newport News	All	3,976	636	6.3	28,557	0.1	\$54,563	\$9,908	Changed	-4,665
114	Weaver Rd	Hampton/NN	All	433,267	20,069	21.6	255,721	1.7	\$1,722,655	\$498,204	Changed	-18,287
115	Fox Hill Rd/Mallory	Hampton	All	211,880	10,108	21.0	161,068	1.3	\$867,621	\$235,895	Changed	-11,059
116	Fort Eustis	Newport News	All	148,204	6,478	22.9	112,630	1.3	\$556,066	\$177,023	Changed	-138,833
117	Phoebus	Hampton	All	186,219	4,986	37.3	52,986	3.5	\$428,023	\$220,324	Changed	77,015
118	Magruder Blvd	Hampton	All	262,193	13,743	19.1	193,889	1.4	\$1,179,690	\$301,384	Changed	32,794
119	Oyster Point	Newport News	All	126,647	13,092	9.7	198,783	0.6	\$1,123,806	\$110,680	Changed	96,436
121	Williamsburg	Newport News	Weekday peak	9,297	1,017	9.1	41,124	0.2	\$87,265	\$7,911	Changed	-6,948
4XX	Peninsula Commuters	Hampton/NN	Weekday peak	77,063	4,206	18.3	80,350	1.0	\$361,019	\$86,824	Existing	227
918	VB/Naval Station	Norfolk/VB	Weekday peak	7,324	509	14.4	15,139	0.5	\$43,694	\$21,564	Existing	22
919	VB/Naval Station	Norfolk/VB	Weekday peak	45,614	2,490	18.3	65,920	0.7	\$213,713	\$105,282	Existing	134
922	Chesapeake/Naval Station	Norfolk/Chesapeake	Weekday peak	45,372	2,669	17.0	68,917	0.7	\$229,071	\$133,467	Existing	134
960	Norfolk/Virginia Beach	Norfolk/VB	All	102,553	10,489	9.8	225,154	0.5	\$900,316	\$180,430	Existing	302
961	Norfolk/Peninsula	Norfolk/Hampton/NN	All	220,612	16,433	13.4	375,039	0.6	\$1,410,535	\$472,025	Existing	649
962	Norfolk/Portsmouth/Suffolk	Norfolk/Portsmouth	Weekday peak	24,161	3,847	6.3	114,647	0.2	\$330,231	\$25,797	Existing	71
967	VB/Chesapeake/NN	VB/Chesapeake/NN	Weekday peak	45,529	1,966	23.2	94,823	0.5	\$168,721	\$36,029	Existing	134
										Total Change in Ridership		784,675

Table 5.2 Recommended Light Rail and Ferry Service Operations Plan – 2017

Service	Name	City(ies)	Service Days/Times	Annual Ridership (Est.)	Annual Platform Hours	Riders per Platform Hour	Annual Revenue Miles	Riders per Revenue Mile	Annual Operating Cost (Est.)	Annual Fare Revenue (Est.)	New/Changed/ Existing	Estimated Change in Riders
Light Rail												
	The Tide	Norfolk	All	1,058,500 <sup>2</sup>	28,483	37.2	368,400	2.9	\$ 13,673,692	\$1,458,305	Existing	See Note <sup>3</sup>
Ferry												
	Paddlewheel Ferry	Norfolk/Portsmouth	All	320,614	6,160	52.0	12,444	25.8	\$ 1,458,095	0	Existing	23,000

<sup>2</sup> Actual The Tide Ridership for September 2011 averaged about 5,100 riders per weekday. Annual budgeted ridership is based on The Tide Final Environmental Impact Statement, or 2,900 per day. For consistency with the TDP Financial Plan, the annual ridership estimate here reflect the budgeted number (2,900 multiplied by 365 days).

<sup>3</sup> Actual The Tide Ridership for September 2011 averaged about 5,100 riders per weekday. Annual budgeted ridership is based on The Tide Final Environmental Impact Statement, or 2,900 per day. For consistency with the TDP Financial Plan, the annual ridership estimate here reflect the budgeted number (2,900 multiplied by 365 days).

Table 5.3 Proposed Fixed Route Service Changes: FY2012 -FY2017

Route	Name	City	Service Issue Observed	Proposed Service Reduction	Impact on Service Area and Communities	Estimated Cost Savings	Source of Service Recommendation
1	Granby St	Norfolk/VB	Low ridership (<10) on individual trips	16 trips cut	Reduced peak service and fringe	(\$98,916)	SE Study
2	Hampton Blvd	Norfolk	Low ridership (<10) on individual trips	42 trips cut	Fringe and Saturday service reduced	(\$173,472)	SE Study
3	Chesapeake Blvd	Norfolk	Low ridership (<10) on individual trips	13 trips cut	Reduced late night and peak service	(\$96,302)	SE Study
4	Church St	Norfolk	Low ridership (<10) on individual trips	18 trips cut	Fringe service reduced	(\$104,247)	SE Study
5	Willoughby-Evelyn Butts	Norfolk	Low ridership (<10) on individual trips	8 trips cut	Early AM service reduced	(\$34,320)	SE Study
6	South Norfolk/Robert Ha	Norfolk/Chesapeake	Low ridership (<10) on individual trips	34 trips cut	Short trips cut; hourly service remains	(\$198,088)	SE Study
8	Tidewater Drive	Norfolk	Low ridership (<10) on individual trips	2 trips cut	Last trip cut	(\$17,704)	SE Study
9	Sewells Point	Norfolk	Low ridership (<10) on individual trips	31 trips cut	Early AM trips cut	(\$100,089)	SE Study
9	Sewells Point	Norfolk	Circuitous route and duplication into downtown	Truncate at NSU	Evaluate after move to Wood Street	(\$307,557)	COA
11	Colonial Ave	Norfolk	Low ridership (<10) on individual trips	59 trips cut	All service reduced; hour headway	(\$215,244)	SE Study
13	Campostella	Norfolk/Chesapeake	Low ridership (<10) on individual trips	50 trips cut	Midday short turns cut	(\$162,766)	SE Study
14	Battlefield Blvd	Chesapeake	Low ridership (<10) on individual trips	6 trips cut	Early AM trip cut	(\$19,061)	SE Study
15	Crosstown	Norfolk/Chesapeake	Low ridership (<10) on individual trips	16 trips cut	Peak period short trips cut	(\$210,413)	SE Study
18	Ballentine Blvd	Norfolk	Low ridership (<10) on individual trips	11 trips cut	First and last trips cut	(\$48,243)	SE Study
20	Virginia Beach Boulevard	Norfolk/VB	Low ridership (<10) on individual trips	3 trips cut	Supplemental peak trips cut	(\$25,572)	SE Study
20	Virginia Beach Boulevard	Virginia Beach	Low demand on outer segment	Cut Atlantic Ave segment	Year-round service on Route 30 will substitute for some of thie service	(\$160,000)	TDP
23	Princess Anne Rd	Norfolk	Low ridership (<10) on individual trips	4 trips cut	First and last trips cut	(\$21,314)	SE Study
25	Newtown Rd	Norfolk/VB	Low ridership (<10) on individual trips	25 trips cut	Short trips cut; hourly service remains	(\$110,156)	SE Study
26	Bow Creek Blvd	Virginia Beach	Low ridership (<10) on individual trips	6 trips cut	First and last trips cut	(\$21,753)	SE Study
29	Great Neck	Virginia Beach	Low ridership (<10) on individual trips	8 trips cut	First and last trips cut	(\$30,787)	SE Study
30	Atlantic Ave	Virginia Beach	Low ridership (<10) on individual trips	300 trips cut	Reduced frequency	(\$275,441)	SE Study

Route	Name	City	Service Issue Observed	Proposed Service Reduction	Impact on Service Area and Communities	Estimated Cost Savings	Source of Service Recommendation
31	Museum	Virginia Beach	Low ridership (<10) on individual trips	176 trips cut	Early and late service cut	(\$213,935)	SE Study
32	Lynnhaven Mall	Virginia Beach	Low ridership (<10) on individual trips	4 trips cut	First and last trips cut	(\$39,470)	SE Study
33	General Booth Blvd	Virginia Beach	Low ridership (<10) on individual trips	20 trips cut	Reduced peak service; hourly headway	(\$81,684)	SE Study
33	General Booth Blvd	Virginia Beach	Low demand on northern segment	Cut back to 19th Street	Reduction of service north of 19th Street. Coordinate with year-round service on Route 30.	(\$159,348)	TDP
36	Holland Rd	Virginia Beach	Low ridership (<10) on individual trips	7 trips cut	Evening service cut	(\$64,990)	SE Study
37	Dam Neck-Oceana	Virginia Beach	Low ridership (<10) on individual trips	74 trips cut	Full elimination. Coverage to be replaced by new Route 38	(\$95,962)	SE Study
41	Craddock	Portsmouth	Low ridership (<10) on individual trips	2 trips cut	2 supplemental peak trips cut	(\$29,506)	SE Study
45	Portsmouth Blvd	Portsmouth	Low ridership (<10) on individual trips	7 trips cut	Late night trips cut	(\$34,042)	SE Study
47	High Street	Portsmouth	Low ridership (<10) on individual trips	17 trips cut	Evening trip cut; eliminate short line	(\$59,575)	SE Study
50	Academy Park	Portsmouth	Low ridership (<10) on individual trips	7 trips cut	Early AM trips cut	(\$26,930)	SE Study
57	Deep Creek Blvd	Portsmouth	Low ridership (<10) on individual trips	2 trips cut	Evening trip cut	(\$23,682)	SE Study
64	Smithfield	Hampton	Low ridership (<10) on individual trips	4 trips cut	Reduce service (peak only)	(\$62,946)	SE Study
101	Kecoughtan	Hampton/NN	Low ridership (<10) on individual trips	4 trips cut	Late night trip cut	(\$27,215)	SE Study
102	Queen Street	Hampton	Low ridership (<10) on individual trips	23 trips cut	Cut service after 7:00 p.m.	(\$91,959)	SE Study
103	Shell Rd	Hampton/NN	Low ridership (<10) on individual trips	4 trips cut	Reduced early AM service	(\$43,276)	SE Study
105	Briarfield Rd	Hampton/NN	Low ridership (<10) on individual trips	5 trips cut	Reduced early AM and late night service	(\$60,694)	SE Study
106	Warwick Blvd	Newport News	Low ridership (<10) on individual trips	7 trips cut	Peak short trips cut	(\$41,308)	SE Study
109	Buckroe	Hampton	Low ridership (<10) on individual trips	13 trips cut	Reduced late night service	(\$41,902)	SE Study
109	Buckroe	Hampton	Low ridership; little unique service	Eliminate	Part of larger restructuring plan	(\$350,046)	COA
110	Thomas Nelson CC	Hampton/NN	Low ridership (<10) on individual trips	1 trips cut	Adjust early AM service	(\$3,579)	SE Study
111	Riverside	Hampton/NN	Low ridership (<10) on individual trips	10 trips cut	Reduce service to hourly all day	(\$101,833)	SE Study
112	Jefferson Ave	Newport News	Low ridership (<10) on individual trips	4 trips cut	Reduce AM peak and late night service	(\$50,820)	SE Study
113	Fort Eustis	Newport News	Low ridership (<10) on individual trips	8 trips cut	Retain only two round trips	(\$57,847)	SE Study
114	Weaver Rd	Hampton/NN	Low ridership (<10) on individual trips	11 trips cut	Reduce AM peak and late night service	(\$70,104)	SE Study
115	Fox Hill Rd	Hampton	Low ridership (<10) on individual trips	66 trips cut	Cut half of service to hourly headway	(\$319,676)	SE Study
116	Mall Hall	Newport News	Low ridership (<10) on individual trips	4 trips cut	Cut last trip	(\$42,628)	SE Study
117	Phoebus	Hampton	Low ridership (<10) on individual trips	15 trips cut	Cut evening trips after 8:00 p.m.	(\$33,911)	SE Study
118	Magruder Blvd	Hampton	Low ridership (<10) on individual trips	7 trips cut	Cut evening trips after 10:00 p.m.	(\$67,845)	SE Study
120	Mallory	Hampton	Low ridership (<10) on individual trips	15 trips cut	Cut first trip and all trips after 9:00 p.m.	(\$59,382)	SE Study
120	Mallory	Hampton	Inefficient route structure	Elimination	Service folded into expanded Route 115	(\$276,558)	COA
121	Williamsburg	Newport News	Low ridership (<10) on individual trips	2 trips cut	Run only one trip in each peak period	(\$59,012)	SE Study

Table 5.4 Proposed Fixed Route Service Reductions: FY2012 -FY2017

Route	Name	City	Service Issue Observed	Proposed Service Reduction	Impact on Service Area and Communities	Estimated Cost Savings	Year to be Implemented	Source of Service Recommendation
1	Granby St	Norfolk/VB	Low ridership (<10) on individual trips	16 trips cut	Reduced peak service and fringe	(\$98,916)	2012	SE Study
2	Hampton Blvd	Norfolk	Low ridership (<10) on individual trips	42 trips cut	Fringe and Saturday service reduced	(\$173,472)	2012	SE Study
3	Chesapeake Blvd	Norfolk	Low ridership (<10) on individual trips	13 trips cut	Reduced late night and peak service	(\$96,302)	2012	SE Study
4	Church St	Norfolk	Low ridership (<10) on individual trips	18 trips cut	Fringe service reduced	(\$104,247)	2012	SE Study
5	Willoughby-Evelyn Butts	Norfolk	Low ridership (<10) on individual trips	8 trips cut	Early AM service reduced	(\$34,320)	2012	SE Study
6	South Norfolk/Robert Hall	Norfolk/Chesapeake	Low ridership (<10) on individual trips	34 trips cut	Short trips cut; hourly service remains	(\$198,088)	2012	SE Study
8	Tidewater Drive	Norfolk	Low ridership (<10) on individual trips	2 trips cut	Last trip cut	(\$17,704)	2012	SE Study
9	Sewells Point	Norfolk	Low ridership (<10) on individual trips	31 trips cut	Early AM trips cut	(\$100,089)	2012	SE Study
9	Sewells Point	Norfolk	Circuitous route and duplication into downtown	Truncate at NSU	Evaluate after move to Wood Street	(\$307,557)	2015	COA
11	Colonial Ave	Norfolk	Low ridership (<10) on individual trips	59 trips cut	All service reduced; hour headway	(\$215,244)	2012	SE Study
13	Campostella	Norfolk/Chesapeake	Low ridership (<10) on individual trips	50 trips cut	Midday short turns cut	(\$162,766)	2012	SE Study
14	Battlefield Blvd	Chesapeake	Low ridership (<10) on individual trips	6 trips cut	Early AM trip cut	(\$19,061)	2012	SE Study
15	Crosstown	Norfolk/Chesapeake	Low ridership (<10) on individual trips	16 trips cut	Peak period short trips cut	(\$210,413)	2012	SE Study
18	Ballentine Blvd	Norfolk	Low ridership (<10) on individual trips	11 trips cut	First and last trips cut	(\$48,243)	2012	SE Study
20	Virginia Beach Boulevard	Norfolk/VB	Low ridership (<10) on individual trips	3 trips cut	Supplemental peak trips cut	(\$25,572)	2012	SE Study
20	Virginia Beach Boulevard	Virginia Beach	Low demand on outer segment	Cut Atlantic Ave segment	Year-round service on Route 30 will substitute for some of this service	(\$160,000)	2012	TDP
23	Princess Anne Rd	Norfolk	Low ridership (<10) on individual trips	4 trips cut	First and last trips cut	(\$21,314)	2012	SE Study
25	Newtown Rd	Norfolk/VB	Low ridership (<10) on individual trips	25 trips cut	Short trips cut; hourly service remains	(\$110,156)	2012	SE Study
26	Bow Creek Blvd	Virginia Beach	Low ridership (<10) on individual trips	6 trips cut	First and last trips cut	(\$21,753)	2012	SE Study
29	Great Neck	Virginia Beach	Low ridership (<10) on individual trips	8 trips cut	First and last trips cut	(\$30,787)	2012	SE Study
30	Atlantic Ave	Virginia Beach	Low ridership (<10) on individual trips	300 trips cut	Reduced frequency	(\$275,441)	2012	SE Study
31	Museum	Virginia Beach	Low ridership (<10) on individual trips	176 trips cut	Early and late service cut	(\$213,935)	2012	SE Study
32	Lynnhaven Mall	Virginia Beach	Low ridership (<10) on individual trips	4 trips cut	First and last trips cut	(\$39,470)	2012	SE Study
33	General Booth Blvd	Virginia Beach	Low ridership (<10) on individual trips	20 trips cut	Reduced peak service; hourly headway	(\$81,684)	2012	SE Study
33	General Booth Blvd	Virginia Beach	Low demand on northern segment	Cut back to 19th Street	Reduction of service north of 19th Street. Coordinate with year-round service on Route 30.	(\$159,348)	2014	TDP



Route	Name	City	Service Issue Observed	Proposed Service Reduction	Impact on Service Area and Communities	Estimated Cost Savings	Year to be Implemented	Source of Service Recommendation
36	Holland Rd	Virginia Beach	Low ridership (<10) on individual trips	7 trips cut	Evening service cut	(\$64,990)	2012	SE Study
37	Dam Neck-Oceana	Virginia Beach	Low ridership (<10) on individual trips	74 trips cut	Full elimination. Coverage to be replaced by new Route 38	(\$95,962)	2012	SE Study
41	Craddock	Portsmouth	Low ridership (<10) on individual trips	2 trips cut	2 supplemental peak trips cut	(\$29,506)	2012	SE Study
45	Portsmouth Blvd	Portsmouth	Low ridership (<10) on individual trips	7 trips cut	Late night trips cut	(\$34,042)	2012	SE Study
47	High Street	Portsmouth	Low ridership (<10) on individual trips	17 trips cut	Evening trip cut; eliminate short line	(\$59,575)	2012	SE Study
50	Academy Park	Portsmouth	Low ridership (<10) on individual trips	7 trips cut	Early AM trips cut	(\$26,930)	2012	SE Study
57	Deep Creek Blvd	Portsmouth	Low ridership (<10) on individual trips	2 trips cut	Evening trip cut	(\$23,682)	2012	SE Study
64	Smithfield	Hampton	Low ridership (<10) on individual trips	4 trips cut	Reduce service (peak only)	(\$62,946)	2012	SE Study
101	Kecoughtan	Hampton/NN	Low ridership (<10) on individual trips	4 trips cut	Late night trip cut	(\$27,215)	2012	SE Study
102	Queen Street	Hampton	Low ridership (<10) on individual trips	23 trips cut	Cut service after 7:00 p.m.	(\$91,959)	2012	SE Study
103	Shell Rd	Hampton/NN	Low ridership (<10) on individual trips	4 trips cut	Reduced early AM service	(\$43,276)	2012	SE Study
105	Briarfield Rd	Hampton/NN	Low ridership (<10) on individual trips	5 trips cut	Reduced early AM and late night service	(\$60,694)	2012	SE Study
106	Warwick Blvd	Newport News	Low ridership (<10) on individual trips	7 trips cut	Peak short trips cut	(\$41,308)	2012	SE Study
109	Buckroe	Hampton	Low ridership (<10) on individual trips	13 trips cut	Reduced late night service	(\$41,902)	2012	SE Study
109	Buckroe	Hampton	Low ridership; little unique service	Eliminate	Part of larger restructuring plan	(\$350,046)	2012	COA
110	Thomas Nelson CC	Hampton/NN	Low ridership (<10) on individual trips	1 trips cut	Adjust early AM service	(\$3,579)	2012	SE Study
111	Riverside	Hampton/NN	Low ridership (<10) on individual trips	10 trips cut	Reduce service to hourly all day	(\$101,833)	2012	SE Study
112	Jefferson Ave	Newport News	Low ridership (<10) on individual trips	4 trips cut	Reduce AM peak and late night service	(\$50,820)	2012	SE Study
113	Fort Eustis	Newport News	Low ridership (<10) on individual trips	8 trips cut	Retain only two round trips	(\$57,847)	2012	SE Study
114	Weaver Rd	Hampton/NN	Low ridership (<10) on individual trips	11 trips cut	Reduce AM peak and late night service	(\$70,104)	2012	SE Study
115	Fox Hill Rd	Hampton	Low ridership (<10) on individual trips	66 trips cut	Cut half of service to hourly headway	(\$319,676)	2012	SE Study
116	Mall Hall	Newport News	Low ridership (<10) on individual trips	4 trips cut	Cut last trip	(\$42,628)	2012	SE Study
117	Phoebus	Hampton	Low ridership (<10) on individual trips	15 trips cut	Cut evening trips after 8:00 p.m.	(\$33,911)	2012	SE Study
118	Magruder Blvd	Hampton	Low ridership (<10) on individual trips	7 trips cut	Cut evening trips after 10:00 p.m.	(\$67,845)	2012	SE Study
120	Mallory	Hampton	Low ridership (<10) on individual trips	15 trips cut	Cut first trip and all trips after 9:00 p.m.	(\$59,382)	2012	SE Study
120	Mallory	Hampton	Inefficient route structure	Elimination	Service folded into expanded Route 115	(\$276,558)	2012	COA
121	Williamsburg	Newport News	Low ridership (<10) on individual trips	2 trips cut	Run only one trip in each peak period	(\$59,012)	2012	SE Study

## **6 CAPITAL IMPROVEMENT PROGRAM**

### **6.1 Introduction**

This chapter describes the capital improvement program adopted by HRT for the 6-year period from FY2012 through FY2017. The costs to implement the fleet replacement plan as well as the facility improvements highlighted in this chapter are financially constrained. The capital improvements presented in this chapter are to support the operations and services described in previous sections of this TDP.

### **6.2 Fleet Replacement, Expansion, Rehabilitation, and Reduction Policies**

#### ***Bus***

HRT has adopted a goal to maintain an average bus fleet age of seven years, including its spare buses (20% of the fleet). In conjunction with this goal, HRT has established maintenance practices to operate buses over a 14-year life span. HRT has no planned rehabilitation or mid-life overhaul program; some agencies have one to allow deferred maintenance to be covered with a capital program rather than the annual operating budget, but planned rehabilitation is not required for buses. Currently the fleet average age is approximately 7.5 years, but this includes a number of buses that HRT has deemed as excess, including the 10 1997/1999 Chance trolleys which have been recently replaced, as well as 22 1995 Gillig buses that are being readied for disposal. The active fleet as presented in Chapter 3 has an average age of approximately 6.75 years, and Table 6.3 presents a listing of the current fleet and the fleet composition for the six-year TDP timeframe.

HRT intends to continue efforts to ensure maximum availability of its fleet as well as to continue to reduce the fleet emission profile. Recent and planned bus procurements over the next six years will be low floor buses with access ramps to aid the boarding of passengers with disabilities. At the end of this period, it is expected that more than 92 percent of the fleet will be low-floor with access ramps.

In recent years, HRT has purchased a mix of hybrid (diesel-electric) and diesel buses that use ultra-low sulfur diesel fuel. All future purchases are now expected to be clean diesel buses using ultra-low sulfur diesel fuel, replacing older more traditionally fueled diesel buses.

HRT anticipates maintaining a mix of medium length (29-foot) and standard length (35-foot/40-foot) buses in the fleet while moving to a greater percentage of 40-foot buses. The smaller 29-foot buses are still required to provide service along neighborhood streets with tighter turning moves that preclude safe and efficient operation of the standard length buses.

#### ***Light Rail***

HRT has budgeted for component maintenance on its light rail fleet on an annual basis starting one year after light rail operations. The vehicles are programmed to last 25 years, and a mid-life overhaul will need to be considered in future TDPs.



### ***Ferry***

Two of the agency's three ferry vehicles are scheduled to be replaced during the TDP timeframe as they over 30 years old. The other ferry had an engine overhaul within the last three years.

### ***Paratransit***

HRT owns 33 paratransit vans and leases 54 paratransit vehicles through its service contractor. During the life of the TDP, all 33 vans owned by HRT are budgeted to be replaced. The agency's policy is to replace the paratransit vehicles once they have reached 150,000 miles of service, although comprehensive fleet replacement policies are currently under development.

### ***Vanpool***

HRT owns 74 7-, 12-, and 15-passenger vanpool vehicles that it provides to its Traffix Vanpool Program participants. The agency's goal is to replace the paratransit vehicles to maintain an average fleet age of four years, including the 7% spare ratio.

### ***Non-Revenue Support Vehicles***

HRT owns 103 non-revenue vehicles to facilitate field supervisory and maintenance support functions. The agency's aim is to replace these vehicles when they have been operated for more than 90,000 miles; there are currently 23 with mileage greater than 130,000. These 23, as well as those that will reach 90,000 miles in the next six years, are anticipated to be replaced during the six-year TDP timeframe. HRT has programmed the replacement of 49 of the support vehicle fleet during the TDP six-year period.

## **6.3 Fleet Rehabilitation, Removal, Replacement, and Expansion**

### ***Entire Fleet***

Given anticipated revenues, the only portion of its fleet that HRT will be expanding is its vanpool fleet for its Traffix TDM program. In the constrained plan, HRT will not expand its fixed route or paratransit fleets over the six-year TDP time period, but will be replacing many of its vehicles as they reach the end of their useful lives.

Table 6.1 shows the number, type and intended disposition of the vehicles taken out of service or rehabilitated; the specific numbers of each type of standard bus, by year of manufacture, is shown in detail in Table 6.5. Table A-1 in the Appendix shows the identification numbers of all vehicles being removed from service.

Tables 6.2 through 6.4 show the replacement and expansion vehicles that will be added to the fleet during the six-year timeframe. Table 6.3 shows the number of replacement and expansion vehicles by vehicle type, Table 6.3 shows the unit and extended costs of the vehicles, and Table 6.4 shows the funding sources.

**Table 6.1 Vehicle and Vessels to be Removed from Service**

	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017
<b>Removal from Service: Number , Vehicle Type, and Disposition</b>						
Bus	47: 40' bus (22) 35' bus (15) 31' trolley bus (10)	5: 35' bus (5)	24: 35' bus (11) 29' bus (4) 40' bus (9)	23: 35' bus	24: 35' bus (5) 29' bus (19)	20: 35' bus (5) 29' bus (15)
	Bus Disposition: 143 via auction					
Light Rail	-	-	-	-	-	-
Ferry	-	-	1: Passenger ferry	-	-	1: Passenger ferry
	Ferry Disposition: 2 via auction					
Paratransit Vans	-	-	-	13	20	-
Vanpool	6: 15-pax vans	10: 15-pax vans	11: 15-pax vans	6: 15-pax vans	10: 12-pax vans (5) 7-pax vans (5)	9: 12-pax vans (4) 7-pax vans (5)
	Van Disposition: 74 via auction					
Non-Revenue Support Vehicles	-	14: 11 vans 2 pickups 1 SUV	9: 8 vans 1 sedan	26: 9 vans 1 flatbed truck 5 pickups 11 sedans	-	-
	Support Vehicle Disposition: 49 via auction					

**Table 6.2 Number of Replacement and Expansion Vehicles**

Vehicle Type and Length	Service Type	Replacement / Expansion	Fuel	Seating Capacity/ Wheelchair Capacity	Expected Vehicle Life	Fiscal Year Placed in Service					
						FY12	FY13	FY14	FY15	FY16	FY17
<b>Standard 29-foot Buses</b>	Fixed route	Replacement	ULSD*	26/2	12-14 years	-	-	4	-	12	13
<b>Standard 35-foot Buses</b>	Fixed route	Replacement	ULSD	35/2	12-14 years	9	5	-	-	-	-
<b>Standard 40-foot Buses</b>	Fixed route	Replacement	ULSD	38/2	12-14 years	-	-	20	23	12	7
<b>Passenger Ferry (60')</b>	Fixed route	Replacement	ULSD	150	25 years	-	-	1	-	-	1
<b>Paratransit Vans (22.7')</b>	Demand response	Replacement	ULSD	12/4	150,000 miles	-	-	-	13	20	-
<b>7-Passenger Van (17')</b>	Vanpool	Replacement	Gasoline	7	4 years/ 100,000 miles	-	-	-	-	5	5
<b>7-Passenger Vans (17')</b>	Vanpool	Expansion	Gasoline	7	4 years/ 100,000 miles	-	3	-	3	-	-
<b>12-Passenger Vans (18')</b>	Vanpool	Replacement	Gasoline	12	4 years/ 100,000 miles	-	-	-	-	5	4
<b>12-Passenger Vans (18')</b>	Vanpool	Expansion	Gasoline	12	4 years/ 100,000 miles	-	3	-	3	-	-
<b>15-Passenger Vans (19.75')</b>	Vanpool	Replacement	Gasoline	15	4 years/ 100,000 miles	6	10	11	6	-	-
<b>15-Passenger Vans (19.75')</b>	Vanpool	Expansion	Gasoline	15	4 years/ 100,000 miles	-	2	-	2	-	-
<b>Non-Revenue Support Vehicles</b>	Non-Revenue	Replacement	Gasoline	5	100,000 miles	-	14	9	26	-	-

Year of manufacture is anticipated to be one year prior to Fiscal Year of acquisition, e.g., acquisition in FY2012 implies manufacture year of 2011

\*ULSD = Ultra Low Sulfur Diesel

Table 6.3 presents HRT's projected cost by year for the replacement of its vehicles and vessels over the six-year TDP period. During this period it is anticipated that HRT will procure 105 standard buses, including 29 29-foot medium length buses, 14 35-foot buses and 62 40-foot standard length transit buses, as shown in the replacement schedule in Table 6.3. The total cost of these 105 buses is currently estimated at approximately \$44 million. In addition to the 105 buses, HRT will replace two ferry vessels at a total cost of \$4 million, 33 paratransit vans at a total cost of nearly \$2.5 million, 49 non-revenue support vehicles for \$1.2 million, and 68 vanpool vehicles at a total expense of \$1.7 million.

**Table 6.3 Cost of Replacement and Expansion Vehicles by Year of Acquisition (*in thousands of \$*)**

	FY12 Costs		FY13 Costs		FY14 Costs		FY15 Costs		FY16 Costs		FY17 Costs	
	Unit	Total	Unit	Total	Unit	Total	Unit	Total	Unit	Total	Unit	Total
<b>29-foot Buses</b>	-	-	-	-	\$392.6	\$1,570.6	-	-	\$408.5	\$4,902.1	\$416.7	\$5,416.8
<b>35-foot Buses</b>	\$387.6	\$3,488.4	\$395.4	\$1,976.7	-	-	-	-	-	-	-	-
<b>40-foot Buses</b>	-	-	-	-	\$424.5	\$8,489.7	\$433.0	\$9,958.4	\$441.6	\$5,299.6	\$450.5	\$3,153.3
<b>Passenger Ferry</b>	-	-	-	-	\$2,000.0	\$2,000.0	-	-	-	-	\$2,122.4	\$2,122.4
<b>Paratransit Vans</b>	-	-	-	-	-	-	\$75.0	\$975.0	\$76.5	\$1,530.0	-	-
<b>Non-Revenue Support Vehicles</b>	--	-	-	-	\$25.0	\$350.0	\$25.5	\$229.5	\$26.0	\$676.3	-	-
<b>7-Passenger Vans</b>	-	-	\$22.4	\$67.1	-	-	\$23.3	\$69.8	\$23.7	\$118.7	\$24.2	\$121.1
<b>12-Passenger Vans</b>	-	-	\$24.2	\$72.6	-	-	\$25.2	\$75.5	\$25.7	\$128.3	\$26.2	\$104.7
<b>15-Passenger Vans</b>	\$25.5	\$153.0	\$26.0	\$312.1	\$26,530	\$291.8	\$27.1	\$216.5				

**Table 6.4 Sources and Funding Amounts for Replacement and Expansion Vehicles (*in thousands of \$*)**

	FY12	FY13	FY14	FY15	FY16	FY17
<b>Bus Replacement Revenue Sources</b>						
State Bond Funding	-	-	\$6,979.6	\$6,617.7	\$2,971.1	\$1,715.3
Estimated Local Advance Capital Contribution Match	-	-	\$1,744.9	\$1,654.3	\$742.8	\$428.8
Congestion Mitigation and Air Quality	-	\$164.3	\$1,335.7	\$1,686.2	\$6,487.9	\$6,425.9
Federal Bonus Obligation / Special Appropriation	\$2,790.7	\$1,450.0	-	-	-	-
Estimated State Match	\$558.1	\$290.0	-	-	-	-
Estimated Local Advance Capital Contribution Match	\$139.5	\$72.5	-	-	-	-
Total	\$3,488.4	\$1,976.8	\$10,060.3	\$9,958.4	\$10,201.7	\$8,570.1
<b>Ferry Replacement Revenue Sources</b>						
5307	-	-	-	-	-	-
CMAQ	-	-	-	-	-	-
Total	-	-	\$2,000.0	-	-	\$2,122.4
<b>Paratransit Vehicle Replacement Revenue Sources</b>						
RSTP	-	-	-	\$975.0	\$1,530.0	-
Total	-	-	-	\$975.0	\$1,530.0	-
<b>Vanpool Vehicle Replacement and Expansion Revenue Sources</b>						
Federal Section 5307 Formula Funds	\$122.4	\$361.4	\$233.5	\$289.4	\$197.6	\$180.6
Estimated State Match	\$24.5	\$72.3	\$46.7	\$57.9	\$39.5	\$36.1
Estimated Local Advance Capital Contribution Match	\$6.1	\$18.1	\$11.7	\$14.5	\$9.9	\$9.0
Total	\$153.0	\$451.8	\$291.8	\$361.8	\$247.0	\$225.8
<b>Non-Revenue Support Vehicles</b>						
RSTP	-	\$350.0	\$229.5	\$676.3	-	-
Total	-	\$350.0	\$229.5	\$676.3	-	-

### ***Detailed Removal and Replacement Information***

#### **Bus Fleet**

Table 6.5 presents the six-year replacement program as currently conceived by HRT and displays the expected fleet composition for each of the next six years. The excess buses in the current fleet will be retired and disposed of, reducing the fleet size from 304 to 264. The plans as presented show that generally buses will be retired upon reaching 14 years and replaced with new low-floor, ramp access, clean diesel buses. The average fleet age will remain slightly above seven years until 2016, when it is expected to fall to exactly seven years and decline further to 6.9 years with the replacement of 20 buses in 2017.

**Table 6.5 Projected Bus Fleet Removal and Replacement Schedule – Composition by Year**

Year	Make	Floor -Access	Length	Seats	2011	2012	2013	2014	2015	2016	2017
1995	Gillig	HF - Lift	40'	42	22						
1997	Chance - Trolley	HF - Lift	31'	28	9						
1999	Chance - Trolley	HF - Lift	31'	28	1						
1999	Gillig	LF - Ramp	35'	32	26	11	6				
2000	Gillig	LF - Ramp	29'	29	4	4	4				
2000	Gillig	HF - Lift	40'	42	9	9	9				
2001	Gillig	HF - Lift	35'	34	24	24	24	19			
2002	Gillig	LF - Ramp	35'	35	9	9	9	9	5		
2002	Gillig	LF - Ramp	29'	26	15	15	15	15	15		
2002	Optima	LF - Ramp	29'	23	9	9	9	9	9	5	
2002	Gillig	LF - Ramp	35'	32	7	7	7	7	7	7	
2003	Gillig	LF - Ramp	35'	35	1	1	1	1	1	1	
2003	Gillig	HF - Lift	35'	36	16	16	16	16	16	16	9
2004	Gillig	HF - Lift	40'	41	11	11	11	11	11	11	11
2004	Gillig	LF - Ramp	40'	40	10	10	10	10	10	10	10
2006	Gillig	LF - Ramp	40'	38	22	22	22	22	22	22	22
2006	Optima	LF - Ramp	29'	23	3	3	3	3	3	3	3
2007	Gillig	LF - Ramp	40'	38	40	40	40	40	40	40	40
2007	Gillig	LF - Ramp	40'	41	7	7	7	7	7	7	7
2007	Gillig -Hybrid	LF - Ramp	29'	26	10	10	10	10	10	10	10
2008	Gillig	LF - Ramp	40'	41	7	7	7	7	7	7	7
2008	Gillig	LF - Ramp	40'	38	7	7	7	7	7	7	7
2008	Gillig -Hybrid	LF - Ramp	29'	26	14	14	14	14	14	14	14
2009	Gillig -Hybrid	LF - Ramp	29'	26	2	2	2	2	2	2	2
2011	Gillig	LF - Ramp	40'	38	6	6	6	6	6	6	6
2011	Gillig -Hybrid	LF - Ramp	29'	26	11	11	11	11	11	11	11
2012	Future	LF - Ramp	35'	35		9	9	9	9	9	9
2013	Future	LF - Ramp	35'	35			5	5	5	5	5
2014	Future	LF - Ramp	40'	38				20	20	20	20
2014	Future	LF - Ramp	29'	26				4	4	4	4
2015	Future	LF - Ramp	40'	38					23	23	23
2016	Future	LF - Ramp	40'	38						12	12
2016	Future	LF - Ramp	29'	26						12	12
2017	Future	LF - Ramp	40'	38							7
2017	Future	LF - Ramp	29'	26							13
	Total ActiveFleet				302	264	264	264	264	264	264
	Average Age				7.51	7.02	7.76	7.48	7.28	7.00	6.90

### Light Rail Fleet

The Tide light rail began service in August 2011, so no major rehabilitation or vehicle replacements are planned for the six-year period. There is also no fleet expansion planned for this time period.

### Ferry Fleet

The Paddlewheel Ferry's three vessels are nearing the end of their useful life of 30 years. Replacement of two of these vessels is planned to occur during the TDP period, one in FY14 and the second in FY17. The third vessel recently received a new engine and is expected to last beyond the TDP timeframe without major overhaul.

### Paratransit Fleet

All 33 of the paratransit vans owned by HRT will be replaced over the TDP timeframe.

### Vanpool Fleet

Over the TDP timeframe, 52 of HRT's 74 vanpool vehicles will be replaced over the TDP timeframe. The vans will replace a mix of 7-, 12-, and 15-passenger vans. In addition to fleet replacement, the fleet will grow by 16 vehicles, including one spare.

### Non-Revenue Support Vehicles

HRT plans to replace 49 of the HRT non-revenue support vehicle fleet between FY13 and FY15: 12 sedans, 8 trucks, and 29 vans/SUVs. This fleet supports management, field supervisory and maintenance functions. This fleet includes 103 total light duty automobiles, vans, and trucks.

## 6.4 Major Facility Replacement, Rehabilitation, Upgrade and Expansion

During the TDP timeframe, several notable facility replacement, rehabilitation, upgrade and expansions will take place, as shown in Table 6.6:

- Five passenger facility projects will be undertaken to upgrade transfer centers.
- Additional facility upgrades to HRT passenger and administrative facilities
- Passenger shelters will be replaced and added throughout the HRT system.
- Bus stops signs will be replaced throughout the HRT system.
- The Southside Maintenance and Administration Building will be completed.

**Table 6.6 Facility Replacement, Rehabilitation, Upgrade and Expansion**

	Funding Source	FY12	FY13	FY14	FY15	FY16	FY17
<b>Passenger Facility Projects</b>							
Military Circle Mall	Federal Formula	\$200,000	\$600,000	-	-	-	-
NET Center	Federal Formula	\$175,000	-	-	-	-	-
Patrick Henry Mall	CMAQ	\$650,000	-	-	-	-	-
Hampton Transit Center and Newport News Transfer Centers	ARRA	\$1,444,000	-	-	-	-	-
Facility Upgrades	RSTP	-	\$116,925	\$3,383,075	-	-	-
<b>Passenger Shelters</b>							
Chesapeake	CMAQ	\$150,000	-	-	-	-	-
Newport News	CMAQ	\$312,400	\$320,000	-	-	-	-
Newport News	RSTP	\$235,237	-	-	-	-	-
Virginia Beach	CMA	\$100,000	-	-	-	-	-
Systemwide*	JARC	-	\$342,250	-	-	-	-
Systemwide	Enhancement	\$238,560	\$246,421	\$243,580	\$262,341	\$271,282	\$278,418
<b>Bus Stop Sign Program</b>							
	RSTP		\$1,308,032	\$238,199			
<b>Southside Maintenance and Administration Building</b>							
	Federal DOT Discretionary	\$8,062,425	-	-	-	-	-
	State DOT Discretionary	\$803,800	-	-	-	-	-
	Local ACC Match	\$1,307,023	-	-	-	-	-
	RSTP	\$1,800,000	-	-	-	-	-
	FSTP	\$939,752	-	-	-	-	-



## 6.5 Tools and Equipment Replacement and/or Upgrades

As shown in Table 6.7, HRT plans to purchase, replace and/or upgrade a variety of tools and equipment during the six-year time period. These investments include:

- Light rail infrastructure replacement and rehabilitation
- Light rail vehicle component maintenance including replacement and overhaul of propulsion, APS, trucks, axle and brake systems and components
- Technology, including PeopleSoft financial and human resources systems, an automated bus dispatch system, and hardware.
- Tools and equipment, including maintenance, radio, and fare collection equipment.

**Table 6.7 Tools, Equipment and Component Replacement/Upgrades**

	FY12	FY13	FY14	FY15	FY16	FY17
<b>LRT Maintenance and Infrastructure</b>						
LRT Wheel Truing Machine		\$1,800,000				
LRT Component Replacement/Overhaul		\$343,620	\$637,100	\$1,240,540	\$832,500	
LRT Infrastructure Replacement and Rehabilitation	-	-	\$35,000	\$49,360	\$974,610	\$820,760
<b>Tools Equipment</b>						
Alignment Machine –Bus	-	\$45,000	-	-	-	-
Tire Pressure and Tread Depth System	\$220,000	-	-	-	-	-
Vehicle Brake System	\$224,788	-	-	--	-	-
EMS – Compliance		\$175,000	\$175,000	\$175,000	\$175,000	\$175,000
Solar Light Project	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
Radio Upgrade	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
Fare Collection Equipment	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000
Safety and Security System Support	\$238,560	\$246,421	\$243,580	\$262,341	\$271,282	\$278,417
<b>Technology</b>						
PeopleSoft HRMS Upgrade	\$150,000	\$312,000	-	-	-	-
PeopleSoft Financial System Upgrade	\$327,800	\$1,100,000	\$613,320	-	-	-
Automated Bus Dispatch System	-	\$500,000	\$500,000	\$500,000	\$500,000	-
Hardware	-	\$100,000	\$200,000	\$200,000	\$200,000	\$200,000

## 6.6 Transit System Expansion

There is no system expansion programmed to start-up in HRT's six-year plan. While some changes will be made to bus service, as described in Chapters 3, 4, and 5, there will be no additional capital investments for transit system expansion under the fiscally constrained operating scenario. Unconstrained transit expansion desires, both on the operating and capital cost sides, are described in detail in Chapter 4.

HRT has programmed funds to begin the planning process to investigate the feasibility of extending its fixed guideway service to the Norfolk Naval Station and to Virginia Beach. Table 6.9 presents the programmed capital funded planning projects by year over the TDP timeframe

**Table 6.9 Transit Extension Project Feasibility Studies**

	Funding Source	FY12	FY13	FY14	FY15	FY16	FY17
<b>Transit Extension Projects</b>							
Fixed Guideway Extension to Norfolk Naval Station and Virginia Beach Oceanfront	RSTP	\$5,000,000	\$5,000,000	\$5,000,000	\$7,000,000	\$7,000,000	-
Virginia Beach Transit Extension Study (AA/SDEIS/PE/FE)	RSTP	-	-	\$1,099,800	\$2,541,200	\$2,599,900	-

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**Chapter 6 Appendix  
Capital Improvement Program**

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**Table A6-1 Identification Number of Vehicles Being Removed from Service**

Identification Numbers		Vehicle/Vessel Type
15GCD2012S1085935	15GCD2011S1085930	1995 Gillig HF-Lift Standard 40' Bus
15GCD201XS1085942	15GCD2015S1085932	
15GCD201XS1085912	15GCD2017S1085933	
15GCD2011S1085913	15GCD2016S1085937	
15GCD2015S1085915	15GCD2011S1085943	
15GCD2012S1085922	15GCD2013S1085914	
15GCD2014S1085923	15GCD2019S1085917	
15GCD201XS1085926	15GCD2012S1085918	
15GCD2011S1085927	15GCD2016S1085924	
15GCD2013S1085928	15GCD201XS1085939	
15GCD2015S1085929	15GCD2018S1085941	
1C9S2HAS8TW535025	1C9S2HAS1VW535046	1997 Chance- Trolley HF-Lift 31' Bus
1C9S2HASXTW535026	1C9S2HAS3VW535047	
1C9S2HAS3TW535028	1C9S2HAS5VW535048	
1C9S2HAS0TW535021	1C9S2HAS7VW535049	
1C9S2HASXVW535045		
1C9S2HDSXXW535142		1999 Chance- Trolley HF-Lift 31' Bus
15GGB1814X1070627	15GGB1817X1070616	1999 Gillig LF-Ramp 35' Bus
15GGB1818X1070629	15GGB1819X1070617	
15GGB1814X1070630	15GGB1810X1070618	
15GGB1812X1070626	15GGB1812X1070619	
15GGB1816X1070607	15GGB1819X1070620	
15GGB1818X1070608	15GGB1810X1070621	
15GGB181XX1070609	15GGB1812X1070622	
15GGB1816X1070610	15GGB1814X1070623	
15GGB1818X1070611	15GGB1816X1070624	
15GGB181XX1070612	15GGB1818X1070625	
15GGB1811X1070613	15GGB1818X1070633	
15GGB1813X1070614	15GGB1819X1070634	
15GGB1815X1070615	15GGB1818X1070990	
15GGE1818Y1090294	15GGE1818Y1090296	2000 Gillig LF Ramp 29' Bus
15GGE1818Y1090295	15GGE1818Y1090297	
15GCD181XY1110338	15GCD1813Y1110343	2000 Gillig HF-Lift 40' Bus
15GCD1811Y1110339	15GCD1815Y1110344	
15GCD181XY1110341	15GCD1817Y1110345	
15GCD1811Y1110342	15GCD1819Y1110346	

Identification Numbers		Vehicle/Vessel Type
15GCB1814Y11110538	15GCB181611110550	2001 Gillig HF-Lift 35' Bus
15GCB1814Y11110539	15GCB181811110551	
15GCB1810Y11110540	15GCB181X11110552	
15GCB181511110541	15GCB181111110553	
15GCB181711110542	15GCB181311110555	
15GCB181911110543	15GCB181511110556	
15GCB181011110544	15GCB181711110557	
15GCB181211110545	15GCB181911110558	
15GCB181411110546	15GCB181011110559	
15GCB181611110547	15GCB181711110560	
15GCB181811110548	15GCB181911110561	
15GCB181X11110549		
15GGB181821072517	15GGB181121072522	2002 Gillig LF-Ramp 35' Bus
15GGB181X21072518	15GGB181321072523	
15GGB181121072519	15GGB181721072525	
15GGB181821072520	15GGB181931072995	
15GGB181X21072521		
1FDXE45S87DB11427	1FDXE45S57DB21672	Paratransit Vans
1FDXE45SX7DB11428	1FDXE45S07DB26665	
1FDXE45S67DB21650	1FDXE45S47DB30184	
1FDXE45S87DB21651	1FDXE45S67DB30185	
1FDXE45SX7DB21652	1FDXE45S87DB30186	
1FDXE45S17DB21653	1FDXE45SX7DB30187	
1FDXE45S07DB21661	1FDXE45S17DB30188	
1FDXE45S27DB21662	1FDXE45S77DB30194	
1FDXE45S47DB21663	1FDXE45S97DB30195	
1FDXE45S67DB21664	1FDXE45S07DB30196	
1FDXE45S87DB21665	1FDXE45S27DB30197	
1FDXE45SX7DB21666	1FDXE45S27DB32614	
1FDXE45S17DB21667	1FDXE45S47DB32615	
1FDXE45S37DB21668	1FDXE45S67DB32616	
1FDXE45S57DB21669	1FDXE45S87DB32617	
1FDXE45S17DB21670	1FDXE45SX7DB36975	
1FDXE45S37DB21671		
2FALP73W7VX191593	2FAFP73W5YX216556	Support Vehicles – Sedans
2FALP73W4VX225554	2B3HD46R52H114287	
2FAFP71W0WX142270	2B3HD46V63H580809	
2FAFP71W6WX142273	2B3HD46V23H580810	
2FAFP71W2WX142271	2FAFP73W03X185449	
2FAFP71W8YX195429	2B3HD46V63H580812	
1FTRX27W9XNB14617	3B7KF26Z61M548091	Support Vehicles – Trucks
1FTRX27W7XNB14616	3B7KC26Z02M317567	
1FTRX17W7YNB31346	3B7KF26Z81M548089	
3B7KF26Z61M548088	J8DB4B1K8R7003546	

Identification Numbers		Vehicle/Vessel Type
1FBNE31L8WHA81846	2B4JB25Z91K537500	Support Vehicles – Vans/SUV
2B5WB35Z41K511524	2B4JB25Z11K537507	
2B5WB35Z61K511525	2B4JB25Z11K537510	
2B5WB35X1TK166181	2B4JB25Z21K537502	
2B5WB35Z1VK509123	2B4JB25Z31K537511	
1FBNE31LXWHA81847	2B4JB25Z01K537512	
1FBNE31L3WHA81849	2B4JB25Z61K537504	
1FBNE31L1WHA81851	2B4JB25Z81K537505	
1FBNE31L3WHA81852	2B4JB25Z51K537509	
1FMRU1762WLB35351	2B4JB25Z01K537501	
2B5WB35Z81K511526	2B5WB35Z31K502880	
2B7JB21Z11K528461	1FBSS31L86HA07869	
2B7JB21ZX1K528460	1FBSS31L56HA07845	
2B4JB25Z41K537503	1FBSS31L86HA07855	
2B4JB25ZX1K537506		
968634		Passenger Ferry
698233		Passenger Ferry



Identification Numbers		Vehicle/Vessel Type
1FBSS31L96HA07873	1GJGG25K391111058	Vanpool Vans
1FBSS31L16HA07874	1GJGG25K2911110905	
1FBSS31L06HA07848	1GJGG25K191112144	
1FBSS31L06HA07879	1GJGG25K391111951	
1FBSS31L36HA07858	1GJGG25K291118020	
1FBSS31L96HA07881	1GJGG25K491118021	
1FBSS31L16HA07857	1GJGG25K691118022	
1FBSS31L66HA07854	1FBSS31LOYHA69950	
1FBSS31L36HA07844	1FBSS31L8YHA69954	
1FBSS31L26HA07852	1FBSS31LXYHA69955	
1FBSS31L36HA07875	1FBSS31L1YHA69956	
1FBSS31L56HA07859	1FBSS31L2YHA69951	
1FBSS31L56HA07876	1FBSS31L6YHA69953	
1FBSS31LX6HA07856	2B5WB35Z6YK105531	
1FBSS31L76HA07880	2B5WB35Z61K509810	
1FBSS31L16HA07843	2B5WB35Z71K511548	
1FBSS31L46HA07870	2B5WB35Z51K501150	
1FBSS31L96HA07864	1FBSS31L66HA07871	
1FBSS31L66HA07868	1FBSS31L46HA07853	
1FBSS31L56HA07862	1FBSS31L16HA07860	
1FBSS31L36HA07861	1FBSS31L76HA07846	
1FBSS31L06HA07865	1FBSS31L96HA07847	
1GNDV23W68D206353	1FBSS31L96HA07878	
1GNDV23W48D206559	1FBSS31L96HA07850	
1GNDV23W88D206516	1FBSS31L86HA07872	
1GNDV23W18D206759	1FBSS31L06HA07851	
1GNDV23WX8D207165	1FBSS31L46HA07867	
1GNDV23WX8D206730	1FBSS31L76HA07863	
1GNDV23W58D206876	1FBSS31L26HA07866	
1GNDV23W98D207612	1GJGG25K891118765	
1GNDV23W28D206656	1GJGG25K391118768	
1GNDV23W58D207574	1GJGG25K591118769	
1GNDV23W38D206357	1GJGG25K891118023	
1GNDV23W18D207796	1GJGG25KX91118024	
1GJGG25K491110968	1GJGG25K691118764	
1GJGG25K391112078	1GJGG25K491118763	
1GJGG25K691110941		

## **7 FINANCIAL PLAN**

### **7.1 Introduction**

The financial plan is a principal component of the TDP. It is in this chapter that an agency demonstrates its ability to provide a sustainable level of transit service over the TDP time period, including the rehabilitation and replacement of capital assets. The details surrounding the transit service improvements and expenditures and capital investments are provided in Chapters 5 and 6, respectively. This chapter identifies anticipated and potential funding sources for annual capital and operating costs and includes tables showing the total annual expenditures.

While not a programming document, the TDP does contain a six-year plan for revenues and expenses. The plan is pivots off of HRT's approved FY 2012 budget and internal working six-year budgeting document, but has been modified to reflect TDP recommendations and other changes that have occurred since the budget was last updated.

### **7.2 Assumptions**

The major assumptions in the TDP financial plan are:

- **Operating Costs**
  - Bus costs grow at 2% annually
  - Paratransit costs grow at 5% annually
  - Ferry costs grow at between approximately 2.5% annually
  - Light rail costs grow at 2.6% annually
- **Revenues**
  - Bus and ferry fare revenue will grow at 1.5% annually due to ridership growth.
  - A fare increase of 33% for all fixed-route service (bus, ferry, light rail) will occur in FY 2015 (an increase to the base cash fare from \$1.50 to \$2.00 and a commensurate increase in pass prices).
    - As discussed in Chapter 5, a fare increase is necessary to backfill the loss of CMAQ operating assistance and reduce the reliance on the use of Preventive Maintenance funding for operations.
  - Advertising at The Tide stations and on and in the vehicles will bring in \$92,000 in FY 2012, growing to \$185,000 in FY 13 and more than \$500,000 by FY 2017.
  - Bus advertising is anticipated to increase due to increased sales staff, from \$261,700 in FY 2012 to \$1.6 million in FY 17.
  - GoPass 365 sales will generate \$371,000 in FY 2012, growing to \$900,000 by FY 2017.
- **Ridership**
  - Ridership will grow by 1.5% annually for bus and ferry.
  - Ridership for light rail will stay at FY 2012 levels (increased to cover a full year) throughout the six years.
  - Ridership will decrease by 7% in FY 2015 (on top of the organic 1.5% growth) in response to the assumed fare increase.

- Capital Costs
  - Costs for capital investments in rolling stock increase at 2% per year.

### **7.3 Changes from FY2012-Based Six-Year Projections**

The major changes and updates from the six-year budget projection are as follows:

- As a result of the City of Suffolk leaving HRT as of December 31, 2011, all Suffolk costs and revenues for FY 2012 were halved; costs and revenues for FY 2013 and later were removed.
- For the remaining six cities being served by HRT, the annual increase to local subsidy was kept at an average annual rate of 5.2%, as originally projected in HRT's six-year working budget.
- The additional revenue from The Tide advertising, Go-Pass sales, and the fare increase allow HRT to reduce reliance on the use of Preventive Maintenance (PM) funding spent on operations, particularly once the fare increase takes place. This results in a total of \$17.8 million that would be reinvested into PM to keep the HRT system in good working order and abide by State of Good Repair (SOGR) guidelines.
  - \$10.6 million of the \$17.8 million will go toward reducing reliance on state bonds for bus purchases, reducing state bond funding from \$18.2 million to \$7.6 million. Draws on future 5307 and 5309 were not assumed, so the additional funding from PM was applied to reduce the bonds on a cash flow basis.
  - An additional \$4.3 million of the \$17.8 million will go toward reducing the draw on future 5307 and 5309 revenues that had been assumed in the six-year budget projections.
  - The remaining \$3.0 million from the PM funds will be held in reserve.
  - Moving the federal formula funds back to the capital budget from operations will necessitate an additional local match of \$4.5 million; however, that match was already needed to match the state bonds, so there is no net impact.

### **7.4 Financial Plan Summary**

Tables 7.1 and 7.2 show the summarized expenditures and funding sources for the six years, including all revenues, federal grants, required match, and draw on future funding. Table 7.3 shows the amount and re-use of the Preventive Maintenance funding moved to the capital budget. The detailed line by line costs and revenue sources are shown in the Chapter 7 Appendix.

**Table 7.1 Financial Plan – Operating Expenses and Revenues**

Operating Expenses	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
<b>TDM</b>	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
<b>Fixed-route Bus</b>	\$65,247,884	\$66,723,485	\$68,057,955	\$69,419,114	\$70,807,496	\$72,223,646
<b>Ferry</b>	\$1,299,679	\$1,334,715	\$1,369,065	\$1,398,674	\$1,427,928	\$1,458,095
<b>Paratransit</b>	\$12,517,359	\$12,979,692	\$13,628,677	\$14,310,111	\$15,025,616	\$15,776,897
<b>Light Rail Transit</b>	\$12,251,467	\$12,340,760	\$12,671,473	\$12,997,193	\$13,330,046	\$13,673,692
<b>TOTAL Operating Expenses</b>	<b>\$92,499,522</b>	<b>\$94,704,836</b>	<b>\$97,111,338</b>	<b>\$99,514,703</b>	<b>\$101,986,250</b>	<b>\$104,533,157</b>
<b>Operating Revenues</b>						
<b>Total Pax Revenue</b>	\$17,582,945	\$17,879,847	\$18,130,359	\$22,552,938	\$22,869,357	\$23,190,523
<b>Advertising</b>	\$261,700	\$412,300	\$765,001	\$1,179,001	\$1,311,838	\$1,611,236
<b>Light Rail Advertising</b>	\$92,000	\$185,000	\$270,000	\$360,000	\$430,000	\$505,000
<b>Go Pass Revenues</b>	\$371,000	\$476,000	\$676,000	\$750,000	\$825,000	\$900,000
<b>Other Non-Transportation</b>	\$405,929	\$405,929	\$405,929	\$405,929	\$405,929	\$405,929
<b>Grant Revenue</b>	\$6,152,419	\$6,129,689	\$6,279,779	\$6,351,302	\$6,408,394	\$6,467,716
<b>Preventive Maintenance</b>	\$13,808,989	\$13,886,304	\$15,029,236	\$10,275,242	\$9,955,971	\$9,711,908
<b>Capital Cost of Contracting</b>	\$2,712,148	\$2,692,802	\$3,032,851	\$3,028,875	\$3,024,457	\$3,068,864
<b>Operating Assistance - State</b>	\$13,218,163	\$12,046,481	\$14,731,275	\$15,312,029	\$15,125,369	\$15,415,303
<b>CMAQ</b>	\$8,491,940	\$5,608,060	\$0	\$0	\$0	\$0
<b>TOTAL Operating Revenues</b>	<b>\$63,097,233</b>	<b>\$59,722,412</b>	<b>\$59,320,430</b>	<b>\$60,215,315</b>	<b>\$60,356,314</b>	<b>\$61,276,478</b>
<b>Local Subsidy Required (Incl. LRT and feeder bus)</b>	\$29,402,289	\$34,982,425	\$37,790,908	\$39,299,387	\$41,629,936	\$43,256,679

**Table 7.2 Financial Plan – Capital Expenses and Revenues**

	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	Total
<b>Capital Expenses</b>							
<b>Capital Lease of Buses</b>	\$2,086,657	\$2,083,548	\$2,080,530	\$2,076,842	\$2,078,943	\$2,076,841	\$14,564,497
<b>Replacement Buses</b>	\$3,488,400	\$1,976,760	\$10,060,252	\$9,958,376	\$10,201,707	\$8,570,096	\$53,475,590
<b>Van Replacement and Expansion</b>	\$153,000	\$451,794	\$291,832	\$361,803	\$247,038	\$225,796	\$1,731,262
<b>LRT Maintenance</b>	\$0	\$2,143,620	\$672,100	\$1,289,900	\$1,807,110	\$820,760	\$6,733,490
<b>Capital Improvement Program</b>	\$7,691,675	\$10,424,800	\$14,251,092	\$12,917,168	\$12,872,460	\$3,229,252	\$61,386,448
<b>TOTAL Capital Expenses</b>	<b>\$13,419,732</b>	<b>\$17,080,521</b>	<b>\$27,355,806</b>	<b>\$26,604,089</b>	<b>\$27,207,257</b>	<b>\$14,922,745</b>	<b>\$137,891,287</b>
<b>Capital Funding</b>	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	
<b>Federal Formula Funds (5307)</b>	\$4,968,688	\$3,820,808	\$5,078,266	\$8,525,933	\$9,272,200	\$10,102,237	\$43,570,300
<b>Non-Federal Match Requirement</b>	\$1,242,172	\$955,202	\$1,269,567	\$2,131,483	\$2,318,050	\$2,525,559	\$10,892,575
<b>Federal Formula Funds (5309)</b>	\$1,609,393	\$153,783	-\$997,388	\$1,039,320	\$2,404,598	\$2,563,781	\$11,370,689
<b>Non-Federal Match Requirement</b>	\$402,348	\$38,446	-\$249,347	\$259,830	\$601,149	\$640,945	\$2,842,672
<b>TOTAL Local Funding Available for Capital Needs</b>	<b>\$1,399,487</b>	<b>\$1,474,407</b>	<b>\$1,551,352</b>	<b>\$1,632,209</b>	<b>\$1,717,175</b>	<b>\$1,806,456</b>	<b>\$14,509,554</b>
<b>TOTAL RSTP, CMAQ and Special Appropriations Funding Available for Capital Needs</b>	<b>\$10,887,457</b>	<b>\$11,557,317</b>	<b>\$16,179,101</b>	<b>\$16,175,815</b>	<b>\$0</b>	<b>\$0</b>	<b>\$60,891,658</b>
<b>TOTAL Capital Revenues</b>	<b>\$20,509,546</b>	<b>\$17,999,963</b>	<b>\$22,831,551</b>	<b>\$29,764,591</b>	<b>\$16,313,172</b>	<b>\$17,638,979</b>	<b>\$144,077,449</b>

**Table 7.3 Use of Preventive Maintenance Funds for Capital – Reduction of Reliance on Capital Funds for Operations**

	FY12	FY13	FY14	FY15	FY16	FY17	Total
<b>Additional 5307 PM Available</b>	\$158,822	\$0	\$452,831	\$4,241,446	\$4,483,499	\$4,789,406	\$14,126,004
<b>Additional 5309 PM Available</b>	\$18,257	\$0	\$157,810	\$1,102,683	\$1,157,122	\$1,324,275	\$3,760,147
<b>Use of 5307 for Bonds</b>	\$0	\$0	\$452,831	\$4,241,446	\$2,971,064	\$1,715,342	\$9,380,684
<b>Use of 5309 for Bonds</b>	\$0	\$0	\$157,810	\$1,102,683	\$0	\$0	\$1,260,493
<b>Total PM toward Bonds</b>	\$0	\$0	\$610,642	\$5,344,129	\$2,971,064	\$1,715,342	\$10,641,177
<b>Remaining Additional 5307</b>	\$158,822	\$0	\$0	\$0	\$1,512,435	\$3,074,064	\$4,745,321
<b>Remaining Additional 5309</b>	\$18,257	\$0	\$0	\$0	\$1,157,122	\$1,324,275	\$2,499,654
<b>Use of Remaining 5307 to reduce draw on future 5307</b>	\$158,822	\$0	\$0	\$0	\$1,512,435	\$983,402	\$2,654,658
<b>Use of Remaining 5307 to reduce draw on future 5309</b>	\$18,257	\$0	\$0	\$0	\$1,157,122	\$442,878	\$1,618,257
<b>Final Remaining 5307 from PM</b>	\$0	\$0	\$0	\$0	\$0	\$2,090,662	\$2,090,662
<b>Final Remaining 5309 from PM</b>	\$0	\$0	\$0	\$0	\$0	\$881,397	\$881,397

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**Chapter 7 Appendix**  
**Financial Plan**



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**Table A7-1 Total Funding Available for Capital Use**

	<i><b>FY12</b></i>	<i><b>FY13</b></i>	<i><b>FY14</b></i>	<i><b>FY15</b></i>	<i><b>FY16</b></i>	<i><b>FY17</b></i>	<i><b>Total</b></i>
<b><i>Total Available Federal Formula Funds</i></b>							
<i>Section 5307 Formula Funds</i>	\$19,713,719	\$19,486,411	\$20,987,317	\$21,702,549	\$22,273,460	\$22,866,682	\$146,114,902
<i>Section 5309 Formula Funds</i>	\$3,076,655	\$3,354,923	\$3,670,455	\$3,784,431	\$5,067,414	\$5,332,204	\$26,808,453
<b><i>Use of Federal Formula Funds for Operating Expenses</i></b>							
<i>ADA</i>	\$1,971,372	\$1,948,641	\$2,098,732	\$2,170,255	\$2,227,346	\$2,286,668	\$14,611,490
<i>Project Administration Expenses</i>	\$9,771	\$338,996	\$345,776	\$352,691	\$359,745	\$366,940	\$1,773,920
<i>Public Participation Planning Expenses</i>	\$0	\$0	\$70,299	\$94,663	\$96,557	\$98,488	\$360,007
<i>Preventive Maintenance from 5307</i>	\$12,922,709	\$13,377,966	\$13,847,075	\$14,800,453	\$14,801,111	\$14,801,754	\$99,925,190
<i>Preventive Maintenance from 5309</i>	\$1,485,519	\$3,201,140	\$4,825,653	\$3,847,794	\$3,819,938	\$4,092,697	\$22,299,581
<i>Preventive Maintenance returned from Operating Budget</i>							
- <i>Total</i>	\$177,079	\$0	\$610,642	\$5,344,129	\$5,640,621	\$6,113,680	\$17,886,151
<i>PM returned from Operating Budget - Applied to 5307</i>	\$158,822	\$0	\$452,831	\$4,241,446	\$4,483,499	\$4,789,406	\$14,126,004
<i>PM returned from Operating Budget - Applied to 5309</i>	\$18,257	\$0	\$157,810	\$1,102,683	\$1,157,122	\$1,324,275	\$3,760,147
<b><i>CUMULATIVE ADDITIONAL 5307 and 5309</i></b>	<b>\$177,079</b>	<b>\$177,079</b>	<b>\$787,721</b>	<b>\$6,131,850</b>	<b>\$11,772,471</b>	<b>\$17,886,151</b>	
<i>Additional Non-Federal Match for increased 5307</i>	\$39,705	\$0	\$113,208	\$1,060,362	\$1,120,875	\$1,197,351	\$3,531,501
<i>Additional Non-Federal Match for increased 5309</i>	\$4,564	\$0	\$39,453	\$275,671	\$289,280	\$331,069	\$940,037
<b><i>Federal Formula Funds Remaining for Capital Use</i></b>							
<i>Section 5307 Federal Formula Funds at 80%</i>	\$4,968,688	\$3,820,808	\$5,078,266	\$8,525,933	\$9,272,200	\$10,102,237	\$43,570,300
<i>Non-Federal Match Requirement</i>	\$1,242,172	\$955,202	\$1,269,567	\$2,131,483	\$2,318,050	\$2,525,559	\$10,892,575
<b><i>TOTAL 5307 Formula Funds Available for Capital Needs</i></b>	<b>\$6,210,860</b>	<b>\$4,776,010</b>	<b>\$6,347,833</b>	<b>\$10,657,417</b>	<b>\$11,590,251</b>	<b>\$12,627,796</b>	<b>\$54,462,875</b>
<b><i>CUMULATIVE 5307 Formula Funds Available for Capital Needs</i></b>	<b>\$8,463,568</b>	<b>\$13,239,578</b>	<b>\$19,587,411</b>	<b>\$30,244,828</b>	<b>\$41,835,078</b>	<b>\$54,462,875</b>	
<i>Section 5309 Federal Formula Funds at 80%</i>	\$1,609,393	\$153,783	-\$997,388	\$1,039,320	\$2,404,598	\$2,563,781	\$11,370,689
<i>Non-Federal Match Requirement</i>	\$402,348	\$38,446	-\$249,347	\$259,830	\$601,149	\$640,945	\$2,842,672
<b><i>TOTAL 5309 Formula Funds Available for Capital Needs</i></b>	<b>\$2,011,742</b>	<b>\$192,228</b>	<b>-\$1,246,736</b>	<b>\$1,299,150</b>	<b>\$3,005,747</b>	<b>\$3,204,727</b>	<b>\$14,213,362</b>
<b><i>CUMULATIVE 5309 Formula Funds Available for Capital Needs</i></b>	<b>\$11,635,332</b>	<b>\$11,827,561</b>	<b>\$10,580,825</b>	<b>\$11,879,975</b>	<b>\$14,885,722</b>	<b>\$18,090,449</b>	

	<b>FY12</b>	<b>FY13</b>	<b>FY14</b>	<b>FY15</b>	<b>FY16</b>	<b>FY17</b>	<b>Total</b>
<b>Available Local Capital Funding</b>	\$1,506,574	\$1,581,903	\$1,660,998	\$1,744,048	\$1,831,250	\$1,922,813	\$11,838,655
<b>Use of Advance Capital Contribution</b>							
Local Advance Capital Contribution Match to PA & PP Expenses	\$107,087	\$107,496	\$109,646	\$111,839	\$114,075	\$116,357	\$752,942
<b>TOTAL Local Funding Available for Capital Needs</b>	<b>\$1,399,487</b>	<b>\$1,474,407</b>	<b>\$1,551,352</b>	<b>\$1,632,209</b>	<b>\$1,717,175</b>	<b>\$1,806,456</b>	<b>\$14,509,554</b>
<b>CUMULATIVE Local Funding Available for Capital Needs</b>	<b>\$9,751,796</b>	<b>\$11,226,203</b>	<b>\$12,777,555</b>	<b>\$14,409,765</b>	<b>\$16,126,939</b>	<b>\$17,933,395</b>	
<b>RSTP, CMAQ, and Special Appropriations Capital Funding</b>							
RSTP Capital Funding	\$7,924,957	\$9,721,112	\$9,541,225	\$9,599,896	\$0	\$0	\$42,379,158
CMAQ Capital Funding	\$1,150,000	\$1,836,205	\$6,637,876	\$6,575,919	\$0	\$0	\$16,700,000
Special Appropriations Capital Funding	\$1,812,500	\$0	\$0	\$0	\$0	\$0	\$1,812,500
<b>TOTAL RSTP, CMAQ and Special Appropriations Funding Available for Capital Needs</b>	<b>\$10,887,457</b>	<b>\$11,557,317</b>	<b>\$16,179,101</b>	<b>\$16,175,815</b>	<b>\$0</b>	<b>\$0</b>	<b>\$60,891,658</b>
<b>CUMULATIVE RSTP, CMAQ and Special Appropriations Funding Available for Capital Needs</b>	<b>\$16,979,425</b>	<b>\$28,536,742</b>	<b>\$44,715,843</b>	<b>\$60,891,658</b>	<b>\$60,891,658</b>	<b>\$60,891,658</b>	

**Table A7-2 Norfolk LRT Capital Improvement Projects**

	FY13	FY14	FY15	FY16	FY17	Total
<b>Light Rail Maintenance</b>						
Procure and Install Wheel Truing Machine	\$1,800,000					\$1,800,000
Propulsion Arc Chute Replacement	\$27,180					\$27,180
Propulsion Contractor Tip Replacement	\$28,080					\$28,080
Propulsion Blower Overhaul			\$18,400			\$18,400
HSBC Renewal	\$18,360					\$18,360
APS Battery Back-up Replacement			\$9,900			\$9,900
APS Contractor Tip Replacement			\$9,900			\$9,900
APS Electrolytic Replacement				\$45,360		\$45,360
APS Cooling Fan Replacement			\$68,760			\$68,760
Trucks Replace Lateral and Vertical Dampers				\$90,540		\$90,540
Truck Tire Reprofiting	\$270,000	\$270,000	\$270,000	\$270,000		\$1,080,000
Truck Tire Replacement MT				\$331,200		\$331,200
Truck Tire Replacement CT		\$165,600				\$165,600
Axle Bearing Renewal				\$95,400		\$95,400
Brake Caliper Overhaul		\$80,000	\$150,000			\$230,000
Brake Disc Overhaul		\$32,000	\$139,200			\$171,200
Brake EHU Overhaul		\$50,000	\$270,000			\$320,000
Brake Selector Switch Overhaul		\$7,500	\$36,000			\$43,500
Brake Hydraulic Suspension Leg Overhaul		\$32,000	\$157,680			\$189,680
Rail Brake Overhaul			\$110,700			\$110,700
<b>Track Maintenance</b>						
Replace Civil Portion of Grade Crossings			\$25,000	\$32,000	\$60,000	\$117,000
Track Realignment and Surfacing, Spot Rail Grinding				\$85,000	\$55,000	\$140,000
Replace Switch Points			\$24,360	\$24,360	\$24,360	\$73,080
Bridge Corrosion Control				\$46,000	\$52,000	\$98,000
Line Painting				\$14,000	\$18,000	\$32,000
Track Drainage Renewal				\$12,000	\$11,100	\$23,100
CBD Pavement Repair/ Replacement				\$25,000	\$32,000	\$57,000
<b>Traction Power Maintenance</b>						
Sump Pump Refurbishment				\$8,000		\$8,000
Rail Lighting Replacement				\$15,000	\$35,000	\$50,000

	FY13	FY14	FY15	FY16	FY17	Total
<b>Batteries</b>				\$148,000	\$111,000	\$259,000
<b>HVAC Subs and Signal Comm Heavy Maintenance</b>				\$13,000	\$17,000	\$30,000
<b>Signal Maintenance</b>						
<b>Switch Machine Rehab &amp; Replacement</b>				\$42,000	\$32,000	\$74,000
<b>SCADA Maintenance</b>						
<b>Replace Servers/ Workstations/ Displays</b>				\$400,250	\$320,300	\$720,550
<b>Upgrade/ Modify Software</b>		\$35,000				\$35,000
<b>UPS Battery Replacement</b>				\$110,000	\$53,000	\$163,000
<b>Total Program Cost</b>	<b>\$2,143,620</b>	<b>\$672,100</b>	<b>\$1,289,900</b>	<b>\$1,807,110</b>	<b>\$820,760</b>	<b>\$6,733,490</b>
<b>Funding Sources</b>						
<b>Federal Section 5309 Formula Funds</b>	\$1,714,896	\$537,680	\$1,031,920	\$1,445,688	\$656,608	\$5,386,792
<b>Estimated State Match</b>	\$37,111	\$72,587	\$139,309	\$195,168	\$88,642	\$532,817
<b>State Mass Transit Funding Percentage</b>	54%	54%	54%	54%	54%	
<b>Estimated City of Norfolk Match</b>	\$391,613	\$61,833	\$118,671	\$166,254	\$75,510	\$813,881
<b>TOTAL Funds Used for LRT CIP</b>	<b>\$2,143,620</b>	<b>\$672,100</b>	<b>\$1,289,900</b>	<b>\$1,807,110</b>	<b>\$820,760</b>	<b>\$6,733,490</b>
<b>Total Funding Already In Place</b>	<b>\$1,040,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,040,000</b>
<b>Total Funding Still Needed in Future Grants</b>	<b>\$1,103,620</b>	<b>\$672,100</b>	<b>\$1,289,900</b>	<b>\$1,807,110</b>	<b>\$820,760</b>	<b>\$5,693,490</b>
<b>Draw on Future Federal Section 5309 Formula Funds</b>	<b>\$674,896</b>	<b>\$537,680</b>	<b>\$1,031,920</b>	<b>\$1,445,688</b>	<b>\$656,608</b>	<b>\$4,346,792</b>
<b>Draw on Future State Mass Transit Funds</b>	<b>\$37,111</b>	<b>\$72,587</b>	<b>\$139,309</b>	<b>\$195,168</b>	<b>\$88,642</b>	<b>\$532,817</b>
<b>Draw on City of Norfolk Funds</b>	<b>\$391,613</b>	<b>\$61,833</b>	<b>\$118,671</b>	<b>\$166,254</b>	<b>\$75,510</b>	<b>\$813,881</b>

**Table A7-3 Capital Improvement Projects**

<i>Account Description</i>	<b>FY12</b>	<b>FY13</b>	<b>FY14</b>	<b>FY15</b>	<b>FY16</b>	<b>FY17</b>	<b>TOTAL</b>
<b>Alignment Machine (Bus) - 18th St &amp; Hampton</b>		\$45,000					\$45,000
<b>Tire Pressure and Tread Depth Measurement System (2 Each)</b>	\$220,000						\$220,000
<b>Hunter B400T/ SS100T Vehicle Brake System (2 Each)</b>	\$224,788						\$224,788
<b>Automated Dispatch System (Bus)</b>		\$500,000	\$500,000	\$500,000	\$500,000		\$2,000,000
<b>Software-PeopleSoft HRMS Upgrade</b>	\$150,000	\$312,000					\$462,000
<b>Software-PeopleSoft Financials Upgrade</b>	\$327,800	\$1,100,000	\$613,320				\$2,041,120
<b>Military Circle Transfer Center</b>	\$200,000	\$600,000					\$800,000
<b>NET Center Repaving</b>	\$175,000						\$175,000
<b>Facility Upgrades</b>		\$116,925	\$3,383,075				\$3,500,000
<b>LRT Extension to Norfolk Naval Station and VB Oceanfront</b>	\$5,000,000	\$5,000,000	\$5,000,000	\$7,000,000	\$7,000,000		\$29,000,000
<b>VB Transit Extension Study (AA/SDEIS/PE/FE)</b>			\$1,099,838	\$2,541,225	\$2,599,896		\$6,240,959
<b>Transit Enhancement (1% Requirement)</b>	\$238,560	\$246,421	\$243,580	\$262,341	\$271,282	\$278,418	\$1,540,603
<b>Systemwide Bus Stop Sign Program</b>	\$591,968	\$1,308,032	\$238,199				\$2,138,199
<b>EMS - Compliance &amp; Sustainability</b>		\$175,000	\$175,000	\$175,000	\$175,000	\$25,000	\$725,000
<b>Solar Lighting Project</b>	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$150,000
<b>Hardware (Refresh and Replace)</b>		\$100,000	\$200,000	\$200,000	\$200,000	\$200,000	\$900,000
<b>Radio Upgrades</b>	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$300,000
<b>Fare Collection Equipment Upgrades</b>	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$1,500,000
<b>Safety and Security (1% Requirement)</b>	\$238,560	\$246,421	\$243,580	\$262,341	\$271,282	\$278,418	\$1,540,603
<b>Replacement of Paratransit Vans (33 vans @ \$75K starting in FY 15)</b>				\$975,000	\$1,530,000		\$2,505,000
<b>Replacement of Support Vehicles (49 vehicles @ \$25K starting in FY 14)</b>		\$350,000	\$229,500	\$676,260			\$1,255,760
<b>Ferry Replacement</b>			\$2,000,000			\$2,122,416	\$4,122,416
<b>Shelter Program</b>							
<b>Total Program Cost</b>	<b>\$7,691,675</b>	<b>\$10,424,800</b>	<b>\$14,251,092</b>	<b>\$12,917,168</b>	<b>\$12,872,460</b>	<b>\$3,229,252</b>	<b>\$61,386,448</b>
<b>Funding Sources</b>							
<b>Federal Section 5307 Formula Funds</b>	\$1,679,766	\$3,079,874	\$1,903,984	\$2,580,754	\$2,498,051	\$983,402	\$12,725,832

<i>Account Description</i>	<b>FY12</b>	<b>FY13</b>	<b>FY14</b>	<b>FY15</b>	<b>FY16</b>	<b>FY17</b>	<b>TOTAL</b>
<b>Federal Section 5309 Formula Funds</b>	\$0	\$0	\$400,000	\$0	\$0	\$1,600,000	\$2,000,000
<b>Estimated State Match</b>	\$226,789	\$415,783	\$311,038	\$348,402	\$337,237	\$348,759	\$1,988,008
<b>Estimated Local Advance Capital Contribution Match</b>	\$193,152	\$354,186	\$264,958	\$296,787	\$287,276	\$297,091	\$1,693,450
<b>Regional Surface Transportation Planning</b>	\$5,591,968	\$6,424,957	\$11,221,112	\$9,541,225	\$9,599,896	\$0	\$42,379,158
<b>Congestion Mitigation and Air Quality</b>	\$0	\$150,000	\$150,000	\$150,000	\$150,000	\$0	\$600,000
<b>TOTAL Funds Used for Future Capital Requests</b>	<b>\$7,691,675</b>	<b>\$10,424,800</b>	<b>\$14,251,092</b>	<b>\$12,917,168</b>	<b>\$12,872,460</b>	<b>\$3,229,252</b>	<b>\$61,386,448</b>
<b>Funding Already in Grants / Programmed Funding</b>	\$7,498,523	\$6,574,957	\$11,371,112	\$9,691,225	\$9,749,896	\$0	<b>\$44,885,713</b>
<b>Total Funding Still Needed in Future Grants</b>	\$193,152	\$3,849,843	\$2,879,980	\$3,225,943	\$3,122,564	\$3,229,252	<b>\$16,500,735</b>
<b>Draw on Future Federal Section 5307 Formula Funds</b>	\$0	\$3,079,874	\$1,903,984	\$2,580,754	\$2,498,051	\$983,402	\$11,046,066
<b>Draw on Future Federal Section 5309 Formula Funds</b>	\$0	\$0	\$400,000	\$0	\$0	\$1,600,000	\$2,000,000
<b>Draw on Future State Mass Transit Funds</b>	\$0	\$415,783	\$311,038	\$348,402	\$337,237	\$348,759	\$1,761,219
<b>Draw on Local Advance Capital Contribution</b>	\$193,152	\$354,186	\$264,958	\$296,787	\$287,276	\$297,091	\$1,693,450

**Table A7-4 Financial Plan Summary**

	<i><b>FY12</b></i>	<i><b>FY13</b></i>	<i><b>FY14</b></i>	<i><b>FY15</b></i>	<i><b>FY16</b></i>	<i><b>FY17</b></i>	<i><b>Total</b></i>
<b>TOTAL Federal 5307 Formula Funds Available for CIP</b>	\$3,242,874	\$1,922,919	\$3,127,350	\$6,043,028	\$3,209,441	\$5,904,840	<b>\$25,130,217</b>
<b>USE of Federal 5307 Formula Funds</b>							
Draw for future capital requests	\$3,079,874	\$1,903,984	\$2,580,754	\$2,498,051	\$983,402	\$2,120,972	\$14,846,804
<b>TOTAL Federal 5307 Formula Funds Remaining (@ 80%)</b>	\$162,999	\$18,935	\$546,596	\$3,544,977	\$2,226,039	\$3,783,868	\$10,283,413
<b>TOTAL 5307 Formula Funds Remaining (@ 100%)</b>	\$203,749	\$23,668	\$683,245	\$4,431,221	\$2,782,549	\$4,729,835	\$12,854,267
<b>CUMULATIVE 5307 Formula Funds Remaining</b>	\$203,749	\$227,418	\$910,663	\$5,341,884	\$8,124,432	\$12,854,267	
<b>TOTAL Federal 5309 Formula Funds Available for CIP</b>	\$934,497	-\$383,897	-\$2,029,308	-\$571,968	\$624,511	\$1,318,214	<b>\$4,489,251</b>
<b>USE of Federal 5309 Formula Funds</b>							
Draw for future capital requests	\$0	\$400,000	\$0	\$0	\$1,600,000	\$0	\$2,000,000
<b>TOTAL Federal 5309 Formula Funds Remaining (@ 80%)</b>	\$934,497	-\$783,897	-\$2,029,308	-\$571,968	-\$975,489	\$1,318,214	<b>\$2,489,251</b>
<b>TOTAL 5309 Formula Funds Remaining (@ 100%)</b>	\$1,168,122	-\$979,872	-\$2,536,636	-\$714,960	-\$1,219,362	\$1,647,767	<b>\$3,111,564</b>
<b>CUMULATIVE 5309 Formula Funds Remaining</b>	\$6,914,625	\$5,934,753	\$3,398,118	\$2,683,158	\$1,463,796	\$3,111,564	
<b>TOTAL RSTP, CMAQ and Special Appropriations Funding Available for CIP</b>	\$7,739,217	\$9,871,112	\$9,691,225	\$9,749,896	\$0	\$0	<b>\$42,979,158</b>
<b>USE of RSTP, CMAQ and Special Appropriations Funds</b>							
Draw for future capital requests	\$6,574,957	\$11,371,112	\$9,691,225	\$9,749,896	\$0	\$0	\$42,979,158
<b>TOTAL RSTP, CMAQ and Special Appropriations Funds Remaining</b>	\$1,164,260	-\$1,500,000	\$0	\$0	\$0	\$0	\$0
<b>CUMULATIVE RSTP, CMAQ and Special Appropriations Funds Remaining</b>	\$1,500,000	\$0	\$0	\$0	\$0	\$0	
<b>TOTAL Local Advance Capital Contribution Available for CIP</b>	-\$244,587	\$1,192,149	-\$396,632	\$366,306	\$773,264	\$1,177,519	<b>\$6,057,995</b>
<b>USE of Local Advance Capital Contribution</b>							
Draw for currently funded capital improvement projects	\$165,833	\$11,676	\$0	\$0	\$0	\$0	\$777,618
Draw for future capital requests	\$193,152	\$354,186	\$264,958	\$296,787	\$287,276	\$297,091	\$1,693,450
<b>TOTAL Local Advance Capital Contribution Remaining</b>	-\$603,573	\$826,287	-\$661,590	\$69,519	\$485,989	\$880,428	<b>\$3,586,928</b>
<b>CUMULATIVE Local Advance Capital Contribution Remaining</b>	\$1,986,295	\$2,812,582	\$2,150,992	\$2,220,511	\$2,706,499	\$3,586,928	



	<i><b>FY12</b></i>	<i><b>FY13</b></i>	<i><b>FY14</b></i>	<i><b>FY15</b></i>	<i><b>FY16</b></i>	<i><b>FY17</b></i>	<i><b>Total</b></i>
<b>Draw on Future State Bond Funding</b>							
Draw for on-going bus replacement	\$0	\$0	\$6,368,968	\$1,273,607	\$0	\$0	\$7,642,575
<b>TOTAL Draw (inc Local Advance Capital Contribution)</b>	\$139,536	\$72,500	\$1,744,902	\$1,060,362	\$742,766	\$428,835	<b>\$4,461,701</b>
<b>Draw on Future State Mass Transit Funding</b>							
Draw for currently funded bus purchases	\$0	\$184,947	\$224,697	\$224,299	\$224,526	\$224,299	\$1,082,768
Draw for on-going van replacement and expansion	\$0	\$72,287	\$46,693	\$57,888	\$39,526	\$36,127	\$252,522
Draw for Norfolk LRT Capital Improvement Projects	\$0	\$37,111	\$72,587	\$139,309	\$195,168	\$88,642	\$532,817
Draw for future capital requests	\$0	\$415,783	\$311,038	\$348,402	\$337,237	\$348,759	\$1,761,219
<b>TOTAL Draw</b>	\$0	\$710,128	\$655,015	\$769,898	\$796,457	\$697,827	<b>\$3,629,326</b>

## **8 TDP MONITORING AND EVALUATION**

### **8.1 Introduction**

This TDP has presented a comprehensive evaluation of Hampton Roads Transit service along with an assessment of the community's transit needs and a financially-constrained short-range plan designed to meet those needs. Key elements that have been addressed in this TDP include:

- An overview of HRT's history, governance, organizational structure, services, fleet, and facilities;
- A compilation of goals, objectives, and standards that guide operations and service delivery;
- A historical analysis of HRT service and financial characteristics and a peer agency review;
- An on-board passenger survey detailing rider demographics, travel behavior, and opinions;
- Compilation of staff and stakeholder outreach regarding current and future transit service;
- A detailed evaluation of existing service characteristics, with identification of system strengths and weaknesses;
- A summary of existing and future land use, population, and employment for the service area;
- An assessment of unconstrained service and facility projects to meet community transportation needs; and
- A fiscally-constrained six-year operating, capital, and financial plan that enhances the existing network and facilities by using anticipated revenues to improve HRT and passenger facilities, replace fleet, and provide improved local and regional transit services.

This TDP provides a framework and roadmap by which HRT can make future improvements to its services and operations. It is the community's plan, reflecting the input and guidance from the following sources:

- HRT staff;
- Representatives from participating cities in the region (Chesapeake, Hampton, Newport News, Norfolk, Portsmouth, and Virginia Beach);
- The HRT New Starts Committee;
- The HRT Mobility Work Group;
- The Transit Riders Advisory Committee (a subcommittee under the Transportation District Commission of Hampton Roads); and,
- HRT riders themselves.

It is designed to be a living plan that is used to place day-to-day decisions in an overarching context, and can be updated as needed to reflect the evolving nature of HRT and the community.

This chapter details the measures and controls that ensure the TDP can be effectively executed and maintained by aligning with local, regional, and state goals and providing for periodic monitoring of the TDP program.

## **8.2 Coordination with Other Plans and Programs**

Close coordination is required with each of the participating cities, as they provide 31% of the funding for HRT and largely provide direction for service and capital improvements; the cities should review and understand the goals and objectives set forth in this TDP. To the extent that the cities can incorporate HRT's goals and objectives into the transportation components of their Comprehensive Plans, the regionally focused objectives of HRT will have a better chance of being reached. In addition, coordination efforts must also continue with the Hampton Roads Planning District Committee (HRPDC) and the Hampton Roads Transportation Planning Organization (HRTPO) to further the efforts of getting HRT's objectives recognized and incorporated at a regional level. Formal coordination meetings with other regional transit providers are suggested as a means to ensure continual communication and awareness of service planning efforts. HRT staff will share the TDP with all of these aforementioned agencies to ensure widespread distribution of the TDP; staff will follow up with the cities to discuss coordination of the HRT TDP with the cities' Comprehensive Plan Transportation Elements.

Within HRT, the TDP will be shared with many departments to ensure that the recommendations and guidance that it provides are utilized throughout the organization. These departments include planning, service planning, facilities, bus operations, and the CFO. This internal coordination will occur on an annual basis, with these departments providing input to the annual updates, much as they did in the development of this initial TDP.

In order to ensure ongoing coordination with other plans and programs, HRT staff will do the following, on an annual basis – first with this original TDP and subsequently with the annual updates:

- Submit the service and capital improvements contained in the TDP to the TPO for inclusion in the regional TIP and LRTP;
- Share the TDP recommendations with each member city as a basis for funding and service changes for the upcoming fiscal year; and
- Work internally to achieve consensus on TDP updates among the impacted departments.

## **8.3 Service Performance Monitoring: Dashboard**

HRT monitors performance at the system level through its Performance Dashboard, updated monthly. As mentioned in Chapter 2 of this TDP, the Performance Dashboard includes the following five areas:

- Operating Budget (year-to-date vs. actual expenditures)
- Construction Project Expenditures (planned vs. actual)
- Ridership (current month vs. previous year)
- Customer Service (percent answered calls)
- On-Time Performance (current month percent on-time)

## **8.4 Ongoing Performance Monitoring for TDP Performance Measures**

In addition to the dashboard, this TDP has identified specific system-wide and route-level service performance measures to ensure HRT's performance characteristics are monitored and therefore can be corrected if any negative trends occur. Corrective measures are to be taken if these monitoring efforts identify service performance degradation (e.g., through route alignment adjustments, headway and/or span of service adjustments). This TDP recommends a monitoring program that could be used for periodic service evaluation. Specific ways to implement a continuous monitoring program for several key service performance measures are as follows.

### ***Ridership: Passengers per Revenue Hour, by Trip, and Average Total Ridership***

The primary means of monitoring ridership are regular farebox reports and periodic pointchecks at the peak load points of bus routes. Farebox data will be monitored at least quarterly to determine if ridership levels are changing significantly (more than 20%). Those routes that do exhibit a significant change should be prioritized for a full ridecheck. Pointchecks can help to monitor overall ridership trends, but they are most useful to discover crowded conditions on high-ridership routes.

### ***On-Time Performance***

HRT staff will monitor this information on an ongoing (but no less than quarterly) basis to determine if scheduled running times are inadequate for certain routes. In addition, pointchecks can serve as a secondary source of information on reliability, as the arrival times of buses are recorded when they pass the peak load point.

### ***Farebox Recovery***

HRT staff will monitor the farebox recover by route on an annual basis to track route performance and determine if changes need to be made.

### ***Access to Transit***

HRT will re-calculate the percentage of service area population and employment has access to any HRT service and high frequency service on an annual basis, to include all service changes made in the previous year.

## **8.5 Annual TDP Update**

DRPT requires the submittal of an annual letter that provides updates to the contents of this TDP. Recommended contents of this "TDP Update Letter" include:

- A summary of ridership trends for the past 12 months both by mode and by route. New routes should be evaluated after two years to provide adequate time for the new route to establish ridership and provide an accurate baseline to compare against.
- The Tide feeder bus changes discussed in Chapters 3 and 4 of the TDP should be evaluated one year after The TIDE opening.
- A description of TDP goals and objectives that have been advanced over the past 12 months.
- A list of improvements (service and facility) that have been implemented in the past 12 months, including identification of those that were noted in this TDP.

## Chapter 8: TDP Monitoring and Evaluation

- An update to the TDP's list of recommended service and facility improvements (e.g., identify service improvements that are being shifted to a new year, are being eliminated, and/or are being added). This update of recommended improvements should be extended one more fiscal year to maintain a six-year planning period.
- A summary of current year costs and funding sources.
- Updates to the financial plan table presented in Chapter 7 of this TDP. These tables should be extended one more fiscal year to maintain a six-year planning period.

**Hampton Roads Transit**  
**Transit Development Plan**  
***FY 2012 – FY 2017***

*Prepared by:*



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# Transportation District Commission of Hampton Roads

## *RESOLUTION NO. 05-2011*

A Resolution of the Transportation District Commission of Hampton Roads adopting the HRT Transit Development Plan: FY 2012-FY 2017

**WHEREAS**, the Virginia Department of Rail and Public Transportation has required all transit agencies in Virginia to complete a six year plan for operations and capital improvements, Hampton Roads Transit (HRT) has developed the HRT Transit Development Plan: FY 2012-FY 2017 (TDP);

**WHEREAS**, the TDP will serve as a management and guidance document for HRT;

**WHEREAS**, the TDP will provide the basis for inclusion of HRT's capital and operating programs in programming and planning documents, including the Six Year Improvement Program (SYIP), Statewide Transportation Improvement Program (STIP), Transportation Improvement Program (TIP) and Constrained Long Range Plan (CLRP);

**WHEREAS**, the TDP will support the development of a fiscally constrained annual capital and operating plan;

**WHEREAS**, the TDP will serve to maximize the investment of public funds and improve the efficiency and effectiveness of public transportation;


**NOW, THEREFORE, BE IT RESOLVED** that the Transportation District Commission of Hampton Roads adopts the attached HRT Transit Development Plan: FY 2012-FY 2017.

**APPROVED and ADOPTED** by the Transportation District Commission of Hampton Roads at its meeting on the 8th day of December, 2011.

TRANSPORTATION DISTRICT COMMISSION  
OF HAMPTON ROADS

  
Patricia P. Woodbury, Chairperson

ATTEST:

  
Brian K. Jackson, Secretary  
Date: December 8, 2011



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## INTRODUCTION

The Transit Development Plan (TDP) for Hampton Roads Transit (HRT) was initiated based on the guidance of the Virginia Department of Rail and Public Transportation (DRPT) issued in November 2008. Transit Development Plans (TDPs) help transit agencies around the country improve their efficiency and effectiveness by identifying the need and required resources for modifying and enhancing services provided to the general public.

DRPT requires that a TDP is completed every six years and that an annual update letter also be submitted describing progress made towards implementing the TDP and any significant changes. The TDP that is completed every six years must be acted on by the HRT Commission, while the annual letter must be signed by the General Manager (or his/her designee) and does not require governing body action.

The plan is required to be fiscally constrained based on reasonably anticipated revenues and includes an operations, capital, and financial plan. In addition to the fiscally constrained plan, the TDP also contains other ideas for service expansion that would benefit the HRT customers and the municipalities in which it operates should additional funding become available.

While the TDP reflects fiscal realities and provides a solid foundation for HRT's funding requests to the state, it is not a budgeting document nor is it a programming document. Instead, it provides a blueprint and guidance for HRT to follow as it continues its current service and makes changes over the next six-years to provide the most comprehensive and cost-effective service for its customers and the region.

The TDP has presented a comprehensive evaluation of HRT service along with an assessment of the community's transit needs and a financially-constrained short-range plan designed to meet those needs. Key elements that have been addressed in this TDP include:

- An overview of HRT's history, governance, organizational structure, services, fleet, and facilities;
- A compilation of goals, objectives, and standards that guide operations and service delivery;
- A historical analysis and peer agency review of HRT service and financial characteristics;
- An on-board passenger survey detailing rider demographics, travel behavior, and opinions;
- Extensive staff and stakeholder outreach regarding current and future transit service;
- A detailed evaluation of existing service characteristics, with identification of system strengths and weaknesses;
- A summary of land use, population, and employment for the service area;
- An assessment of unconstrained service and facility projects to meet community transportation needs; and
- A fiscally-constrained six-year operating, capital, and financial plan that enhances the existing network and initiates new local, regional, and commuter services.

This TDP provides a framework and roadmap by which HRT can make future improvements to its services and operations. It is designed to be a living plan that can be updated as needed to reflect the evolving nature of HRT and the community.

## **BACKGROUND**

### **History and Governance**

HRT, incorporated on October 1, 1999, began through the voluntary merger of Pentran and Tidewater Regional Transit, the region's two public transit operators. HRT currently serves the Southside and Peninsula areas of Hampton Roads, consisting of the cities of Hampton, Norfolk, Newport News, Portsmouth, Suffolk, Chesapeake, and Virginia Beach. The purpose of HRT is to provide reliable and efficient transportation services and facilities to the Hampton Roads community.

Effective January 1, 2012, the City of Suffolk has chosen to withdraw from the Transportation District Commission of Hampton Roads and HRT will no longer provide transit services within Suffolk. As a result, the City of Suffolk is not included within this Transit Development Plan (TDP) beyond December 31, 2011.

HRT is governed by the Transportation District Commission of Hampton Roads (TDCHR). The TDCHR was established in accordance with Chapter 45 of Title 15.2 of the Code of Virginia, as amended, referred to as the Transportation District Act of 1964 and by ordinances adopted by the governing bodies of its components governments.

### **Transit Services Provided and Areas Served**

HRT operates fixed local bus routes within and between its member cities; a regional express service called the MAX; paddlewheel ferry service between downtown Portsmouth and downtown Norfolk by way of the Elizabeth River; Handi-Ride (ADA service); and The Tide Light Rail Transit Service in Norfolk. These services are described below:

- Fixed Bus Local service: HRT currently operates over seventy fixed local bus routes that operate 15 minute and 30 minute peak frequency within the urban areas and 30 and 60 minute frequency in the suburban areas and during non-peak areas. In addition, the Norfolk Electric Trolley (NET) operates in downtown Norfolk and the Ghent area. The VB Wave is a seasonal service with four routes along the Virginia Beach Oceanfront.
- MAX Express Bus service: The MAX, introduced in 2008, offers limited stop express service on seven routes between major destinations in Hampton Roads. The routes operate on over the road coach style buses that provide Wi-Fi Internet connections.
- Handi-Ride: Through a contracted service provider, HRT provides paratransit, lift equipped van service commonly known as Handi-Ride to fulfill ADA requirements. Service is provided during the same hours of operation as the regularly scheduled HRT buses. The service is available within 3/4 of a mile of regularly scheduled bus routes and is available to certified passengers.
- Ferry Service: Through a contracted service provider, HRT provides ferry service on the Elizabeth River between downtown Norfolk and Olde Town Portsmouth. The ferry begins at Waterside in Norfolk, with two stops in Portsmouth at High Street and North Landing. Seasonal service is provided during the Norfolk Tides minor league baseball games.
- Light Rail Service: HRT operates the first light rail transit (LRT) system in Virginia. Called The Tide, the 7.4 mile LRT system runs from downtown Norfolk to the Norfolk/Virginia Beach border.

## **GOALS, OBJECTIVES AND STANDARDS**

The agency has had several different iterations of goals and objectives, which were refined during the TDP process. In addition, the TDP recommends a series of performance measures and standards for HRT to use, both those that will be utilized in the analysis portions of the TDP and those that will be useful in ongoing monitoring of service delivery.

The goals for HRT have been identified as:

Goal 1: Make Hampton Roads Transit a transportation provider of choice in the region.

Goal 2: Support the coordination of transportation planning with land use to promote regional economic sustainability and livability.

Goal 3: Achieve financial stability and efficiency

Goal 4: Improve capital asset management and maintain state of good repair for all assets and facilities.

Goal 5: Develop and maintain a workforce that is highly qualified, efficient, and motivated by excellence.

Goal 6: Make Hampton Roads Transit safe and secure for customers and employees.

In addition to the goals and associated objectives, the TDP defines a series of performance measures upon which the agency can measure how well it is achieving given objectives and goals. The TDP Analysis Design Measures relate to service design and are used to measure how well the current HRT system matches service delivery objectives in terms of route coverage and route frequency. The TDP Analysis Performance Measures are used to evaluate the existing transit service that HRT operates (and proposed future service) and how each service offering performs. The measures and standards used in the TDP development are shown in Table ES-1.

**Table ES-1 Performance Measures Used in the HRT Transit Development Plan**

Performance Measure	Parameters	Standard
<b>TDP ANALYSIS DESIGN MEASURES</b>		
Percentages of service area population that have access to any service and to high frequency service	15-minute headway= high frequency	85% any service 25% high frequency service
Percentages of service area employment that have access to any service and to high frequency service	15-minute headway = high frequency	85% any service 50% high frequency service
<b>TDP ANALYSIS PERFORMANCE MEASURES</b>		
On-time performance as percent of total trips and by route	Current standard: on-time $\leq$ 5 minutes late.	85% system average 75% route level
Passengers per revenue hour or Passengers per trip (MAX routes) - Systemwide, by route, by time period (weekday peak/weekday off-peak/weekend)		50% of system average (by mode by time period)
Average total ridership by trip(weekday and weekend)	Calculated on a quarterly basis.	Minimum of 10 riders per trip
Farebox recovery for fixed-route services (Systemwide, by mode, by route)		50% of system average by mode

## SERVICE AND SYSTEM EVALUATION

### Regional Overview

The evaluation of HRT's service was performed in the context of two recent planning efforts: the *Comprehensive Operations Analysis* (August, 2009) and the *Service and Schedule Efficiency Study* (March, 2011). These two studies covered much of the analysis that comprises the required elements of the TDP. The following sections draw considerable background from these documents, as well as from the *FY10 Summary of Ridership and Revenue Annual Report* (March, 2011), produced by HRT staff.

The change in population and the density of each city in the HRT service area are shown in Table ES-2; the weighted average population density across HRT's service area is 1,660, indicating a generally suburban land use pattern. Chesapeake and Virginia Beach are characterized by lower density development, whereas Norfolk is the most densely populated city at over 4,500 people per square mile.

**Table ES-2 HRT Service Area Cities Population and Population Density**

	2000 Population	2010 Population	Change	% Change	Square Miles	Persons Per Square Mile, 2010
<b>Virginia Beach</b>	425,257	437,994	12,737	3.0	248	1,766
<b>Norfolk</b>	234,403	242,803	8,400	3.6	53	4,581
<b>Chesapeake</b>	199,184	222,209	23,025	11.6	340	654
<b>Newport News</b>	180,150	180,719	569	0.3	68	2,658
<b>Hampton</b>	146,437	137,436	(9,001)	(6.1)	51	2,695
<b>Portsmouth</b>	100,565	95,535	(5,030)	(5.0)	33	2,895
<b>Total</b>	1,285,996	1,316,696	30,700	2.4	793	1,660

Source: 2010 Census

## Peer Review

HRT was compared to several peer agencies to see how it compares to similar transit agencies; the set of peers was chosen because of their similarity to HRT in terms of overall size, population density, and transit trips per capita.

**Table ES-3 HRT Peer Agencies**

	Urbanized Area Square Miles	Urbanized Area Pop. (millions)	Service Area Square Miles	Service Area Pop. (millions)	Pop. per Square Mile	Annual Unlinked Passenger Trips (millions)	Annual Unlinked Trips per Capita
Regional Transit (Sacramento, CA)	369	1.39	277	1.10	3,964	17.74	16
PSTA (Pinellas County, FL)	802	2.06	240	0.88	3,682	11.95	14
JTA (Jacksonville, FL)	411	0.88	242	0.83	3,419	10.25	12
HRT	527	1.39	369	1.21	3,281	15.19	13
COTA (Columbus, OH)	398	1.13	325	1.06	3,255	17.21	16
Community Transit (Snohomish County, WA)	954	2.71	279	0.73	2,618	10.29	14

Serving a sprawling metropolitan area divided by a major harbor crossing and without a major central city, HRT operates a large amount of service at a very low per-unit cost, compared to its peer agencies. However, the productivity of that service is relatively poor compared to the peers, mainly because the amount of service that HRT is able to operate with its finite financial resources is not sufficient to develop a sustainable market of choice riders and is not particularly desirable even to the transit-dependent customers. Combined with limited resources, the dispersed travel patterns in the HRT region present a major challenge for conventional transit.

## Service Performance Analysis

### Service Design

To quantify how accessible HRT services are to the service area population and jobs, a performance measure is used that reports the percentage of population and employment within ¼ mile of HRT service. Both access to any HRT service and to high frequency HRT service were measured, as shown in Table ES-4. The calculations were conducted by using Traffic Analysis Zone (TAZ) data from 2009 for the number of jobs, and 2010 Census data for the population.

**Table ES-4 Access to HRT Service Within ¼ Mile**

	Any HRT Service	Standard: Any Service	High Frequency Service*	Standard: High Frequency
<b>Percentages of service area <u>population</u> that have access to service and to high frequency service</b>	67%	85%	16%	25%
<b>Percentages of service area <u>employment</u> that have access to service and to high frequency service</b>	95%	85%	43%	50%

\* High frequency is defined as 15-minute service or better (during peak hours and/or all-day).

### Productivity

For fixed local bus routes, productivity is defined in terms of the number of boardings per vehicle revenue hour of service. Revenue time is defined as the time the bus is running its route plus scheduled layover time; it does not include the time the bus spends traveling to and from the garage at the beginning and end of a run. The productivity of all HRT routes are shown in Table ES-5.

**Table ES-5 Weekday Productivity (boardings per vehicle revenue hour)**

Route	Peak	Off Peak
1	36.0	38.9
2	24.0	20.2
3	29.4	28.0
4	8.0	8.5
5	22.4	23.6
6	21.9	19.1
8	32.1	28.7
9	19.7	17.8
11	15.0	13.1
12	21.3	18.8
13	34.7	26.1
14	27.0	29.9
15	31.4	34.9
18	14.6	13.5
20	33.1	34.7
23	31.1	27.4
25	17.3	15.8
26	15.2	15.5
27	30.2	22.6
29	19.8	15.5
33	18.5	17.8
36	33.6	24.7
37	2.9	6.0
41	15.3	17.0
44	17.3	16.7
45	33.0	26.5
47	20.5	21.4
50	24.4	23.2
57	17.1	14.0
58	20.1	17.0
101	39.0	33.1
102	16.4	14.9
103	23.3	22.3
104	22.1	17.1
105	31.0	24.9
106	34.5	31.1
107	33.3	28.6



Route	Peak	Off Peak
<b>109</b>	20.4	16.7
<b>110</b>	23.0	22.0
<b>111</b>	18.5	18.4
<b>112</b>	32.5	30.1
<b>113</b>	14.6	10.2
<b>114</b>	25.5	23.4
<b>115</b>	19.6	17.9
<b>116</b>	27.2	20.7
<b>117</b>	63.1	44.6
<b>118</b>	23.6	22.4
<b>119</b>	9.3	8.9
<b>120</b>	24.6	17.7
<b>121</b>	11.0	
<b>System Average</b>	<b>24.0</b>	<b>21.7</b>
<b>66% of Average</b>	<b>16.0</b>	<b>14.4</b>
<b>50% of Average</b>	<b>12.0</b>	<b>10.8</b>

## Bus Service Recommendations

Using input from the previously conducted Service Efficiency Study (2011), the Comprehensive Operations Analysis (2009) and additional TDP review, a series of recommendations were made for changes to bus service. The recommendations include elimination of trips and of routes, cuts to route segments, restructuring to combine portions of certain routes with other routes, extensions of routes, and the implementation of a limited stop version of one route. The changes that are recommended for implementation in the budget constrained TDP are shown in the discussion of the operating plan as shown in Chapter 5.

## SERVICE EXPANSION PROJECTS

While there are more service expansion projects recommended in the TDP than can be funded within reasonably anticipated revenues, the operating and capital plans reflect fiscal realities. For example, while Chapter 4 of the TDP lists all service recommendations, only those that are cost constrained by city are included in the operating plan in Chapter 5. There are no anticipated service increases on either of the other two fixed route modes, The Tide light rail and the Paddlewheel Ferry.

Table ES-6 shows the cost constrained service expansion over the six years of the TDP included in Chapter 5 following the service reductions recommended in the Service Efficiency Study. Please note that in order to stay cost constrained by city, no additional expansions in Portsmouth were feasible. Route 43 was added during FY 2012, but after the completion of the FY 2012 budget process.

**Table ES-6 Fiscally Constrained Bus Service Improvements by City**

Route	Route Description for TDP Recommendations
<b>Norfolk</b>	
1	Split route at Pleasure House/Shore Drive. Append outer portion to Route 36. Operate 30-minute headway from Granby at Ocean View to Pleasure House at Shore Drive.
8	Segment north and east of Evelyn T Butts becomes part of new Route 21.
12	Extend span of service to 10:45 p.m.
15	Shorten route and move northern segment to new Route 21. Operate at 15 minute headway during peak and midday as far as The Tide station at Military Highway; 60 minute service to Robert Hall and Greenbrier Mall
18	Extend route to Amphibious Base via Norview and Azalea Garden.
20	Operate short trips to Pembroke East through midday on weekdays.
21	Create new route from segments from Route 8 and Route 15 connecting Amphibious Base to Naval Station Norfolk
23	Fifteen minute service during the peak period
25	Extend span of service to 10:45 p.m.
<b>Virginia Beach</b>	
1	Split route at Pleasure House/Shore Drive. Append outer portion to Route 36. Operate 30-minute headway from Granby at Ocean View to Pleasure House at Shore Drive.
12	Increase span to 10:45pm
20	Eliminate service beyond 19th/Pacific. Improve Saturday headway to 30 minutes. Operate short trips to Pembroke East through midday on weekdays.
25	Extend span of service to 10:45 p.m.
27	Extend span of service to 10:45 p.m.
36	Extension of route to Pleasure House/ Shore Drive to cover former segment of Route 1, 30 minute peak period service
<b>Chesapeake</b>	
12	Extend span of service to 10:45 p.m.
14	Extend span of service to 10:45 p.m.
<b>Hampton</b>	
109	Route eliminated as part of restructuring to increase service headways on Route 117
115	Restructure service with Route 120 to create a bidirectional loop in eastern Hampton.
117	Improve daytime headway to 30 minutes
120	Restructure service with Route 115 to create a bidirectional loop in eastern Hampton
<b>Newport News</b>	
106	Restructure this route, and improve peak headway to 20 minutes.
107	Eliminated as part of restructuring of routes to provide improve service
108	New route takes over part of current 116
112	Shorten route as part of restructuring plan
116	Split route and operate Lee Hall and Fort Eustis leg on new route 108.
119	Extend route to north as part of restructuring plan and operate on weekends

## CAPITAL ASSETS

### Existing Capital Assets

#### ***Bus Fleet and Maintenance***

The HRT fleet inventory as of August 1, 2011 consisted of 302 vehicles, including 255 diesel buses, 37 hybrid buses and 10 trolley-style buses. The active fleet of 264 buses (302 total less the 38 decommissioned buses) has an average age of approximately 6.75 years. HRT policy is to replace a bus after 12-14 years of service, thereby seeking to maintain an average fleet age of seven years. The bus fleet service requirements for the TDP timeframe are shown in Table ES-7, and the six-year plan for bus fleet replacement is shown in Table ES-8.

**Table ES-7 HRT Bus Fleet Service Schedule Requirement**

	August 2011	FY2012	FY2013-17
<b>Peak Requirement</b>	205	220	220
<b>20% Spare Allowance</b>	41	44	44
<b>Total</b>	246	264	264
<b>Contingency Fleet</b>	18	0	0
<b>Decommissioned Bus fleet</b>	38	38	0
<b>Total Fleet</b>	302	302	264

**Table ES-8 HRT Six-Year Bus Fleet Replacement Plan**

Year	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	Total
<b>29 - foot</b>	0	0	4	0	12	13	29
<b>35 - foot</b>	9	5	0	0	0	0	14
<b>40 - foot</b>	0	0	20	23	12	7	62

The HRT bus fleet is serviced from three maintenance facilities as follows:

- Northside garage - located on Victory Boulevard in Hampton
- Southside garage - located on 18<sup>th</sup> Street in Norfolk
- Virginia Beach Operations Facility – located on Parks Street in Virginia Beach

As the total fleet size is expected to be reduced as vehicles are retired, overall the HRT facilities provide enough capacity to support growth in the fleet for service expansion in the years beyond the TDP six-year planning horizon.

#### ***Light Rail Vehicles and Maintenance***

HRT has recently purchased a fleet of nine light rail low floor articulated vehicles from Siemens that are being used on the new The Tide light rail in Norfolk. The new service began revenue service in August 2011. The existing fleet, delivered in 2009, will meet the schedule requirements through the entire six-year TDP planning horizon. HRT owns the Norfolk The Tide Facility, or Vehicle Storage and Maintenance Facility (VSMF), which serves HRT's nine light rail vehicles (LRV).

### ***Paratransit Vehicles and Maintenance***

HRT owns 33 paratransit vans and leases an additional 54 paratransit vans from the contractor that operates its paratransit service, MV Transportation, to meet service requirements. All of the 33 paratransit vehicles owned by HRT are the 22.7-foot long, 12-passenger 2007 Ford/Startrans E-465 lift-equipped vans. HRT will continue to own 33 of the vehicles in their paratransit vehicle fleet, and the agency is currently establishing paratransit vehicle replacement and maintenance guidelines.

### ***Ferryboats and Facilities***

HRT owns three paddle ferry boats that are approaching 30 to 35 years of age. Two of these vessels will require major overhaul or alternatively replacement to maintain reliable service.

HRT serves four ferry docks for its Paddlewheel Ferry service: Waterside in Norfolk and High Street and North Landing in Portsmouth; a dock at Harbor Park in Norfolk is used only during Norfolk Tides baseball games, although it may become the primary dock in Norfolk when the future Harbor Park transit center opens. HRT owns the water-side portions of the docks, while the cities own the part of the docks that are on land. Regular ferry maintenance is performed at the docks, and all maintenance equipment and parts are owned and stored with the contractor who operates the service. Ferry service is operated under contract to a private provider, Norfolk by Boat.

### ***Vanpool Vehicles***

HRT owns 74 vanpool vehicles for its Trafix Vanpool Program. The fleet is a mix of 7-, 12-, and 15-passenger vans that it provides to participants in the regional vanpool program.

### ***Passenger Facilities***

HRT buses service approximately 3,500 stops, the majority of which consist of a just a bus stop sign. The current signs provide minimal information, however as part of a funded program, HRT will be replacing signs at all bus stops. The new signs will be on dedicated poles and will include information about routes and schedules that serve the stop. There are 199 shelters in the HRT system, most of them at the major transfer centers and other transfer locations.

## **Planned Capital Improvements**

### ***Passenger Facility Improvements***

A summary of HRT's new transfer centers and improvements to existing transit and transfer centers that are expected to be completed within the TDP timeframe are shown in Table ES-9. In addition to the specific transfer center and passenger facility improvements, \$3.5 million in RSTP funding has been allocated for general improvements to all HRT facilities. There is an initiative for bus shelter replacement and expansion throughout the system using a variety of funding sources. HRT refers to any bus stop that is served by more than one bus route a "transfer center," although these centers are not all the same. There are 43 of these "transfer centers" in HRT's service area. The TDP recommends categorizing the transfer centers by level of activity in order to make it easier for HRT staff to identify the types of passenger amenities that belong at each, and also to help the riding public know what type of facilities they can expect at the various transfer points. A more detailed nomenclature is suggested in the TDP, along with a list of which facilities fall into these different classes of transfer locations.

**Table ES-9 HRT Funded Passenger Facility Improvements**

	Funding Source	FY12	FY13	FY14	FY15	FY16	FY17
Military Circle Mall*	Federal Formula	\$200,000	\$600,000	-	-	-	-
NET Center	Federal Formula	\$175,000	-	-	-	-	-
Patrick Henry Mall	CMAQ	\$650,000	-	-	-	-	-
Hampton Transit Center and Newport News Transfer Centers	ARRA	\$1,444,000	-	-	-	-	-
General Facility Upgrades	RSTP		\$116,925	\$3,383,075			
<b>Total Cost</b>		<b>\$2,469,000</b>	<b>\$716,925</b>	<b>\$3,383,075</b>	<b>-</b>	<b>-</b>	<b>-</b>

\* This funding may be utilized for another transfer center, if mall management does not support the improvements.

### ***Bus Shelter Program***

HRT has prepared a passenger shelter program to add units to bus stops and to replace damaged and missing shelters as well as those judged to be in poor condition. HRT has proposed the following order to decide general placement of new shelters:

- Use CMAQ and RSTP funds to install approximately 138 shelters at high activity stops including new and replacement locations within the sponsoring cities.
- Identify high activity bus stops currently without shelters that meet JARC program criteria to serve work-related trips taken by low-income residents and install 42 shelters.
- Install 192 new or replacement shelters at other systemwide locations with high activity using enhancement funds.

### ***Bus Stop Sign Program***

HRT is in the process of having new bus stop signs manufactured and installed at all 3,500 bus stops in the system. The sign program will be funded mostly with \$2,138,199 in RSTP funding that has been allocated across FY2011, FY2012, and FY2013; it is anticipated that those funds would be expended one year following each allocation, i.e., in FY2012 through FY 2014.

### ***Vehicle Replacement and Expansion***

#### **Full Size Bus Replacement**

Over the six year period the agency plans to purchase 105 new buses, 29 29-foot, 14 35-foot and 62 40-foot type heavy duty transit buses. In addition, over this period HRT intends to reduce the total fleet size from 302 to 264 vehicles. The average age of HRT's current bus fleet is 7.5 years and its current active bus fleet is 6.75 years; the average bus fleet age upon implementation of the fleet replacement plan over the six-year period will be 6.9, just under the agency's goal of 7.0.

#### Passenger Vans: Vanpool Replacement and Expansion Program

Over the six-year period from FY 2012 through FY 2017, HRT plans to purchase 68 passenger vans for its Traffic vanpool program, 16 for expansion and 52 to replace vans to be retired.

#### Ferry Replacement

\$2 million is programmed in FY 2014 and \$2.1 million in FY 2017 to replace two paddleboat ferries. These vessels exceed 30 years of age and extensive rehabilitation or replacement is overdue.

#### Paratransit Vehicle Replacement Program

HRT owns 33 Ford StarTrans 2007 model small buses which are provided to their paratransit service operating contractor who leases 54 additional vehicles to serve HRT. The agency is preparing a replacement program.

#### ***The Tide Light Rail Vehicle, Track, and Technology Upgrades***

The new The Tide light rail service began service during FY 2012 (August 2011). HRT prepared a list of "LRT Capital Improvement Projects," specifically to: provide certain maintenance equipment (e.g., wheel truing machine); program vehicle, track, traction power, and signal maintenance; and maintain of components and systems to maintain service reliability.

#### ***Technology Systems and Equipment Upgrades/Acquisitions***

Several legacy computer systems need upgrade to maintain reliability, acquire current features and to support new applications. HRT has also programmed capital funds to provide for the acquisition or upgrade of equipment and systems.

#### **Transit Extension Studies**

There is no light rail system expansion programmed to start-up in HRT's six-year plan. While some changes will be made to bus service, there will be no additional capital needs funded under the fiscally constrained operating scenario. Unconstrained transit expansion desires, both on the operating and capital cost sides, are described in detail in Chapter 4.

HRT has programmed funds for planning studies to investigate the feasibility of extending its fixed guideway service to the Norfolk Naval Station and to Virginia Beach.

#### **FINANCIAL PLAN**

While not a programming document, the TDP does contain a six-year plan for revenues and expenses. The plan is based on HRT's approved FY 2012 budget and internal working six-year budgeting document but has been modified to reflect TDP recommendations and other changes that have occurred since the budget was last updated.

The major items included in the TDP financial plan are:

- Operating Costs
  - Bus costs are anticipated to grow at 2% annually
  - Paratransit costs are anticipated to grow at 5% annually

- Ferry costs are anticipated to grow at approximately 2.5% annually
  - Light rail costs are anticipated to grow at 2.6% annually
- Revenues
  - Bus and ferry fare revenues are anticipated to grow at 1.5% annually due to ridership growth.
  - As a result of the service efficiency changes, no fare increase has been included in the financial plan through FY 14. A fare increase of 33% (an increase to the base cash fare from \$1.50 to \$2.00 and a commensurate increase in pass prices) is recommended FY 15 due to the following:
    - HRT is using \$14 million (FY12) of its preventive maintenance funds to pay for operating expenses; will likely increase to \$15.6 million starting in FY14.
    - CMAQ funding for operations is reduced by \$3 million annually in FY13 and is no longer available in FY14.
    - Bus cost per hour increases of 38.3% since FY2006.
  - New revenue sources:
    - Advertising at The Tide stations and on and in the LRT vehicles will bring in \$92,000 in FY 2012, growing to \$185,000 in FY 13 and more than \$500,000 by FY 2017.
    - Bus advertising is anticipated to increase due to bringing the sales responsibility in-house and more aggressive sales efforts, from \$261,700 in FY 2012 to \$1.6 million in FY 17.
    - GoPass 365 sales are anticipated to generate \$371,000 in FY 2012, growing to \$900,000 by FY 2017.
- Ridership
  - Ridership is anticipated to grow by 1.5% annually for bus and ferry.
  - Ridership revenue for light rail is estimated at FY 2012 levels (increased to cover a full year) throughout the six years.
  - A decline of 7% in ridership in FY 2015 (on top of the organic 1.5% growth) has been included in the plan in response to the assumed fare increase.
- Capital Costs
  - Costs for capital investments in rolling stock are anticipated to increase at 2% per year.

The major changes and updates from the six-year budget projection are as follows:

- As a result of the City of Suffolk leaving HRT as of December 31, 2011, all Suffolk costs and revenues for FY 2012 were halved; costs and revenues for FY 2013 and later were removed.
- For the remaining six cities being served by HRT, the annual increase to local subsidy was kept at an average annual rate of 5.2%, as originally projected in HRT's six-year working budget. Please note this does not include costs from the Tide and modifications to buses serving The Tide.
- The additional revenue from The Tide advertising, Go-Pass sales, and the fare increase allow HRT to reduce reliance on the use of Preventive Maintenance (PM) funding spent on operations, particularly once the fare increase takes place. This results in a total of \$17.8 million that would be reinvested into PM to keep the HRT system in good working order and abide by State of Good Repair (SOGR) guidelines.

- \$10.6 million of the \$17.8 million will go toward reducing reliance on state bonds for bus purchases, reducing state bond funding from \$18.2 million to \$7.6 million. Draws on future 5307 and 5309 were not assumed, so the additional funding from PM was applied to reduce the bonds on a cash flow basis.
- An additional \$4.3 million of the \$17.8 million will go toward reducing the draw on future 5307 and 5309 revenues that had been assumed in the six-year budget projections.
- The remaining \$3.0 million from the PM funds will be held in reserve.
- Moving the federal formula funds back to the capital budget from operations will necessitate an additional local match of \$4.5 million; however that, match was already needed to match the state bonds, so there is no net impact.

Tables ES-10 and ES-11 shows the financial plan summary.



**Table ES-10 Financial Plan – Operations**

<b>Operating Expenses</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>
<i>TDM</i>	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
<i>Fixed-route Bus</i>	\$65,247,884	\$66,723,485	\$68,057,955	\$69,419,114	\$70,807,496	\$72,223,646
<i>Ferry</i>	\$1,299,679	\$1,334,715	\$1,369,065	\$1,398,674	\$1,427,928	\$1,458,095
<i>Paratransit</i>	\$12,517,359	\$12,979,692	\$13,628,677	\$14,310,111	\$15,025,616	\$15,776,897
<i>Light Rail Transit</i>	\$12,251,467	\$12,340,760	\$12,671,473	\$12,997,193	\$13,330,046	\$13,673,692
<b>TOTAL Operating Expenses</b>	<b>\$92,499,522</b>	<b>\$94,704,836</b>	<b>\$97,111,338</b>	<b>\$99,514,703</b>	<b>\$101,986,250</b>	<b>\$104,533,157</b>
<b>Operating Revenues</b>						
Total Pax Revenue	\$17,582,945	\$17,879,847	\$18,130,359	\$22,552,938	\$22,869,357	\$23,190,523
Advertising	\$261,700	\$412,300	\$765,001	\$1,179,001	\$1,311,838	\$1,611,236
Light Rail Advertising	\$92,000	\$185,000	\$270,000	\$360,000	\$430,000	\$505,000
Go Pass Revenues	\$371,000	\$476,000	\$676,000	\$750,000	\$825,000	\$900,000
Other Non-Transportation	\$405,929	\$405,929	\$405,929	\$405,929	\$405,929	\$405,929
Grant Revenue	\$6,152,419	\$6,129,689	\$6,279,779	\$6,351,302	\$6,408,394	\$6,467,716
Preventive Maintenance	\$13,808,989	\$13,886,304	\$15,029,236	\$10,275,242	\$9,955,971	\$9,711,908
Capital Cost of Contracting	\$2,712,148	\$2,692,802	\$3,032,851	\$3,028,875	\$3,024,457	\$3,068,864
Operating Assistance - State	\$13,218,163	\$12,046,481	\$14,731,275	\$15,312,029	\$15,125,369	\$15,415,303
CMAQ	\$8,491,940	\$5,608,060	\$0	\$0	\$0	\$0
<b>TOTAL Operating Revenues</b>	<b>\$63,097,233</b>	<b>\$59,722,412</b>	<b>\$59,320,430</b>	<b>\$60,215,315</b>	<b>\$60,356,314</b>	<b>\$61,276,478</b>
Local Subsidy Required (Incl. LRT and feeder bus)	\$29,402,289	\$34,982,425	\$37,790,908	\$39,299,387	\$41,629,936	\$43,256,679

**Table ES-11 Financial Plan – Capital**

<b>Capital Expenses</b>	Prior Years	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	Total
Capital Lease of Buses	\$2,081,136	\$2,086,657	\$2,083,548	\$2,080,530	\$2,076,842	\$2,078,943	\$2,076,841	\$14,564,497
Replacement Buses	\$9,220,000	\$3,488,400	\$1,976,760	\$10,060,252	\$9,958,376	\$10,201,707	\$8,570,096	\$53,475,590
Van Replacement and Expansion	\$0	\$153,000	\$451,794	\$291,832	\$361,803	\$247,038	\$225,796	\$1,731,262
LRT Maintenance	\$0	\$0	\$2,143,620	\$672,100	\$1,289,900	\$1,807,110	\$820,760	\$6,733,490
Capital Improvement Program	\$0	\$7,691,675	\$10,424,800	\$14,251,092	\$12,917,168	\$12,872,460	\$3,229,252	\$61,386,448
<b>TOTAL Capital Expenses</b>	<b>\$11,301,136</b>	<b>\$13,419,732</b>	<b>\$17,080,521</b>	<b>\$27,355,806</b>	<b>\$26,604,089</b>	<b>\$27,207,257</b>	<b>\$14,922,745</b>	<b>\$137,891,287</b>
<b>Capital Funding</b>	<b>Prior Years</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>	
Federal Formula Funds (5307)	\$1,802,166	\$4,968,688	\$3,820,808	\$5,078,266	\$8,525,933	\$9,272,200	\$10,102,237	\$43,570,300
Non-Federal Match Requirement	\$450,542	\$1,242,172	\$955,202	\$1,269,567	\$2,131,483	\$2,318,050	\$2,525,559	\$10,892,575
Federal Formula Funds (5309)	\$4,597,203	\$1,609,393	\$153,783	-\$997,388	\$1,039,320	\$2,404,598	\$2,563,781	\$11,370,689
Non-Federal Match Requirement	\$1,149,301	\$402,348	\$38,446	-\$249,347	\$259,830	\$601,149	\$640,945	\$2,842,672
<b>TOTAL Local Funding Available for Capital Needs</b>	<b>\$4,928,468</b>	<b>\$1,399,487</b>	<b>\$1,474,407</b>	<b>\$1,551,352</b>	<b>\$1,632,209</b>	<b>\$1,717,175</b>	<b>\$1,806,456</b>	<b>\$14,509,554</b>
<b>TOTAL RSTP, CMAQ and Special Appropriations Funding</b>	<b>\$6,091,968</b>	<b>\$10,887,457</b>	<b>\$11,557,317</b>	<b>\$16,179,101</b>	<b>\$16,175,815</b>	<b>\$0</b>	<b>\$0</b>	<b>\$60,891,658</b>
<b>TOTAL Capital Revenues</b>	<b>\$19,019,647</b>	<b>\$20,509,546</b>	<b>\$17,999,963</b>	<b>\$22,831,551</b>	<b>\$29,764,591</b>	<b>\$16,313,172</b>	<b>\$17,638,979</b>	<b>\$144,077,449</b>

## **ANNUAL TDP MONITORING AND SERVICE EVALUATION**

DRPT will require submittal of an annual letter that provides updates to the contents of this TDP. Recommended contents of this “TDP Update” letter include:

- A summary of ridership trends for the past 12 months both by mode and by route. New routes should be evaluated after two years to provide adequate time for the new route to establish ridership and provide an accurate baseline to compare against.
- The Tide feeder bus changes proposed in Chapters 3 and 4 of the TDP should be evaluated one year after the TIDE opening.
- A description of TDP goals and objectives that have been advanced over the past 12 months.
- A list of improvements (service and facility) that have been implemented in the past 12 months, including identification of those that were noted in this TDP.
- An update to the TDP’s list of recommended service and facility improvements (e.g., identify service improvements that are being shifted to a new year, being eliminated, and/or being added). This update of recommended improvements should be extended one more fiscal year to maintain a six-year planning period.
- A summary of current year costs and funding sources.
- Updates to the financial plan table presented in Chapter 7 of this TDP. This table should be extended one more fiscal year to maintain a six-year planning period.

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## **1 OVERVIEW OF TRANSIT SYSTEM**

### **1.1 History**

Hampton Roads Transit (HRT), incorporated on October 1, 1999, began through the voluntary merger of Pentran and Tidewater Regional Transit, the region's two public transit operators. HRT currently serves the Southside and Peninsula areas of Hampton Roads, consisting of the cities of Hampton, Norfolk, Newport News, Portsmouth, Suffolk, Chesapeake, and Virginia Beach. The purpose of the HRT is to provide reliable and efficient transportation services and facilities to the Hampton Roads community.

Hampton Roads is located in southeastern Virginia. The Hampton Roads metropolitan area has a population of 1.6 million.

Effective January 1, 2012, the City of Suffolk has chosen to withdraw from the Transportation District Commission of Hampton Roads and HRT will no longer provide transit services within Suffolk. As a result, the City of Suffolk is not included within this Transit Development Plan (TDP) beyond December 31, 2011.

### **1.2 Governance**

HRT is governed by the Transportation District Commission of Hampton Roads (TDCHR). The TDCHR was established in accordance with Chapter 45 of Title 15.2 of the Code of Virginia, as amended, referred to as the Transportation District Act of 1964 and by ordinances adopted by the governing bodies of its components governments.

Each of the seven component governments appoint two members (who may, but need not be, a member of its governing body), who serves at the pleasure of his or her respective component government. The Chairperson of the Commonwealth Transportation Board, or the Chairperson's designee, will be a member, ex-officio. The Speaker of the House of Delegates and the Committee on Privileges and Elections of the Senate will appoint one member of the House of Delegates and one member of the Senate, one of whom will be a resident of the City of Hampton or the City of Newport News and one of whom will be a resident of the City of Chesapeake, the City of Norfolk, the City of Portsmouth, the City of Suffolk or the City of Virginia Beach. The member appointed by the Speaker of the House of Delegates will serve a term of two years and the member appointed by the Committee on Privileges and Elections of the Senate will serve a term of four years. The members of the General Assembly will be eligible for reappointments so long as they remain members of their respective houses, but their terms will terminate if they are no longer members of their respective houses. Members other than those appointed by the General Assembly will serve at the pleasure of their appointing bodies. Each serves a term as designated by statute. The Commission typically meets on the fourth Thursday of each month to conduct the business of HRT.



**TDCHR COMMISSION MEMBERS FOR 2011-2012**

<b><i>Norfolk</i></b>	<b><i>Start of Term</i></b>
The Hon. Paul R. Riddick (Past Chair)	10/01/05
The Hon. Barclay C. Winn	08/01/10
<b><i>Newport News</i></b>	
The Hon. Dr. Patricia P. Woodbury (Chair)	09/01/08
The Hon. Joseph C. Whitaker	09/01/08
<b><i>Virginia Beach</i></b>	
The Hon. James L. Wood	04/27/05
The Hon. John E. Uhrin	07/01/06
<b><i>Hampton</i></b>	
The Hon. George E. Wallace	09/01/08
The Hon. Will J. Moffett	08/01/10
<b><i>Portsmouth</i></b>	
The Hon. Kenneth I. Wright	01/01/11
The Hon. Charles B. Whitehurst, Sr.	09/01/08
<b><i>Suffolk</i></b> (Until December 31, 2011)	
The Hon. Charles F. Brown	07/01/00
The Hon. Curtis R. Milteer, Sr.	07/01/00
<b><i>Chesapeake</i></b>	
The Hon. C. E. "Cliff" Hayes, Jr.	07/01/08
The Hon. Dr. Richard W. "Rick" West (Vice Chair)	08/01/08
<b><i>For the Chairman, Commonwealth Transportation Board</i></b>	
Ms. Thelma Drake	01/21/11
Virginia Department of Rail and Public Transportation (VDRPT)	
<b><i>Virginia General Assembly</i></b>	
The Hon. Mamye E. BaCote	11/01/10
Virginia House of Delegates	
The Hon. Ralph S. Northam	07/01/08
Senate of Virginia	

Beginning July 1, 2012, pursuant to changes approved March 24, 2011 to §15.2-4507 of the Code of Virginia, the Commission will consist of one citizen member appointed by the Governor from each City in the Transportation District. The governing body of each City may appoint either a member of its governing body or its City manager to serve as an ex officio member with voting privileges. Every such ex officio member will be allowed to attend all meetings of the Commission that other members may be required to attend. Vacancies shall be filled in the same manner as the original appointments.

The Chairman of the Commonwealth Transportation Board, or his designee, will continue to be a member of each commission, ex officio with voting privileges. The chairman of the Commonwealth Transportation Board may appoint an alternate member who may exercise all the powers and duties of the chairman of the Commonwealth Transportation Board when neither the chairman of the Commonwealth Transportation Board nor his designee is present at a commission meeting.

There are five established committees that provide input to the governing body as stated in the Commissions bylaws and one ad-hoc committee. These committees are listed below:

- Executive Committee
- Audit/Budget Review Committee
- Operations & Oversight
- Planning and New Starts Development
- Paratransit Committee
- Commission Effectiveness (Ad-hoc)

### **1.3 Organization Structure**

Responsibility for managing the day-to-day tasks rests with the President and CEO. Please see Appendix 1-1 for HRT's Organizational Chart. There are major functional groupings that are each headed by a Chief Officer who reports directly to the President and CEO.

Executive Department:

- President and CEO Philip Shucet
- Chief of Staff David Sullivan
- Responsible for general management of the organization to include all Commission related activities, legal counsel, and each organizational unit as described below.

Administration and Technology:

- Chief of Staff David Sullivan
- This department is responsible for human resources management (personnel policies and procedures, labor relations and contract administration benefits management) organizational development (staffing management, organizational structure, job development, staff development) Drug/Alcohol program, EEO, and all human resources compliance issues.
- This department is also responsible for maintaining HRT databases and information systems for all departments, including the staffing of a help desk to address user needs. It also develops and implements various forms of technology such as web-based communications, fare collection systems, telecommunications, and electronic records management.

Communications Department:

- Interim Chief Communications Officer Brian Smith

- This department is broken down into several smaller units, including Customer Service, Marketing and Government and Community Relations. As a whole, this department is responsible for promoting an accurate and positive image both internally and externally by various means, including working with elected officials, community groups and the news media; creating newsletters; facilitating communication between departments and staff; and coordinating and participating in events. The Communications department also writes content for printed collateral and for the agency's four websites.
  - Customer Service provides telephone information on regional transportation programs, including answering administrative and inbound customer service calls. Inbound calls include route information, lost and found inquiries, fare media information, schedules and customer complaints. Customer Service also provides service by selling fare media, delivery of route schedules and distributing half-fare ID cards for seniors and persons with disabilities along with greeting customers and maintaining the receptionist areas and switchboard.
  - Government and Community Relations oversees all government relations and public outreach activities. Public Outreach Coordinators go out into the community and educate the public about various HRT projects. This group also keeps elected officials up to date on agency happenings.
  - Marketing is responsible for developing marketing campaigns that promote branding awareness and ridership as well as inform the public of new services. Marketing is also responsible for TV, radio and newspaper advertisements, the look and feel of websites, the design of printed brochures, posters and other collateral materials in a uniform and consistent manner.

#### Environmental and Facilities Engineering:

- Chief Environmental and Facilities Engineering Officer Sibyl Pappas
- This department is comprised of three units – Environmental Management and Sustainability (EMS), Design and Construction Management, and Facilities Maintenance.
  - EMS is responsible for the development, implementation, and continuous improvement of HRT's Environmental Management and Sustainability Program. EMS works with all HRT employees and departments to communicate and coordinate EMS procedures and sustainability initiatives (such as pollution prevention and recycling) that are created to minimize environmental impacts and the use of energy and resources in HRT's operations. EMS is also responsible for facilitating HRT's Environmental Policy and ensuring HRT's compliance with all federal, state, and local environmental laws and regulations.
  - Design and Construction Management: This unit is responsible for all renovations to existing HRT facilities and the construction of all new HRT facilities, including the oversight of projects involving maintenance buildings, transfer and transit centers, office spaces, bus shelters, and storage facilities. Design and Construction Management is also responsible for the selection and management of project designers (i.e. architects and engineers) and contractors (i.e. General Contractors and trade contractors), as well as any outside construction management consultants.

- Facilities Maintenance: This sub-department is responsible for maintaining four bus/vehicle maintenance and administration facilities, three bus transportation and ticketing facilities, two bus park-n-ride locations, two light rail facilities (vehicle maintenance and storage), bus passenger shelters, and other bus stop locations. Facilities Maintenance provides day to day operation support to all departments, including lighting replacement and repair, HVAC repair, surplus property management, routine equipment maintenance, and the general upkeep of HRT property (utilities, office equipment, furniture, buildings and grounds). Facilities Maintenance also manages all contracts supporting HRT facilities, such as shelter cleaning, custodial services, general contracting, and solid waste collection and disposal.
- This department will have responsibility for establishing an Engineering Division and a Quality Control/Quality Assurance Division.

Finance Department:

- Chief Financial Officer and Commission Treasurer Henry Li
- This department is responsible for procurement, contract services, accounting, payroll, revenue management, grant services and budget development and management. Accounting includes fixed assets, accounts receivable and accounts payable. Revenue management includes fare collection and cashier responsibilities.

Planning and Development Department:

- Chief Planning and Development Officer Ray Amoruso
- This department is concerned with all network planning on a multi-modal basis; capital project development; regional planning; regional planning and coordination, long-range planning, planning for new fixed guideway transit and corridor planning; and administration of grants made for funding.
  - Service Planning and Scheduling is responsible for planning of fixed routes service and well as the preparation of schedules for all modes. This group is also responsible for bus shelter placement, bus stop placement and inventory, and the annual development of the Transportation Service Plan for each member city. This division is also the warehouse of transit data collection and data analytics including the preparation of the annual submission to the National Transit Database maintain by FTA.
  - Transit Development is responsible for the planning and management of fixed guideway and major capital investments, regional and long-range planning, as well as transit-oriented development projects. This group also supports the preparation of requests for federal, state and local funding as well as managing the planning and environmental assessment for new rail, bus and intermodal transportation.
  - Grants Administration is responsible for the development of the capital budget and all pre- and post-award grant administration, to include the submission of grant applications, amendments, revisions, and close-outs.
  - Business Development is a new business model that will explore ways to further heighten and connect customers with their work places and communities where bus service may not exist or may not be adequate. This group is comprised of:

- Fare Media and Advertising Sales is working to increase the sale of fare media through business partnerships with area businesses and is responsible for all internal and external bus and rail advertising, including the all contracts with outside sales vendors.
- Transportation Demand Management, also known as Traffix, continues its success of moving single riders into vans, carpools, and Teleworking environments. They will also be linked to the sales aspect of all new and current sales ventures.

Safety, Security, and Risk Management Department (SSRM):

- Chief Safety and Security Officer Ron Edwards
- This department is responsible for maintaining a safe and secure environment for employees and patrons of HRT. This is done by providing guidance in identifying and evaluating hazards and vulnerabilities and then minimizing the hazardous conditions and/or vulnerabilities to their lowest achievable level. This department has three offices, Safety, Security and Risk Management. SSRM's goal is to assist HRT in reducing its exposure to risks, threats and hazards.

Operations

- Chief Operations Officer James Price
- Bus Operations
  - This department is responsible for the operations and maintenance of bus operations, paratransit services, and ferry services.
  - HRT owns the ferries used in the ferry service, but contracts the operation to Norfolk by Boat, Inc. HRT owns 33 paratransit vehicles and contracts the operation of the service to MV Transportation, Inc. MV Transportation owns the rest of the vehicles used in the service. The contract with MV Transportation is currently being renegotiated.
  - HRT's contract with Amalgamated Transit Local Union #1177 contract has been approved through June 30, 2014.
- Rail Operations
  - This department is responsible for the operations and maintenance (O&M) of light rail transit. The Rail Operations Officer will oversee this department which will provide operations and maintenance. The department's function will be to provide O&M input into the final design and develop the O&M staffing plan and requirements for start-up and revenue service assuring integration with the existing bus service.

## **1.4 Transit Services Provided and Areas Served**

HRT operates fixed local bus routes within and between its member cities; a regional express service called the MAX; paddlewheel ferry service between downtown Portsmouth and downtown Norfolk by way of the Elizabeth River; Handi-Ride (ADA service); and The Tide Light Rail Transit Service in Norfolk. These services are described below:

- Fixed Bus Local service: HRT currently operates over seventy fixed local bus routes that operate 15 minute and 30 minute peak frequency within the urban areas and 30 and 60 minute frequency in the suburban areas and during non-peak areas. In addition, the Norfolk Electric Trolley (NET) operates in downtown Norfolk and the Ghent area. The VB Wave is a seasonal service with four routes along the Virginia Beach Oceanfront.
- MAX Express Bus service: The MAX, introduced in 2008, offers limited stop express service on seven routes between major destinations in Hampton Roads. The routes operate on over the road coach style buses that provide Wi-Fi Internet connections.
- Handi-Ride: Through a contracted service provider, HRT provides paratransit, lift equipped van service commonly known as Handi-Ride to fulfill ADA requirements. Service is provided during the same hours of operation as the regularly scheduled HRT buses. The service is available within 3/4 of a mile of regularly scheduled bus routes and is available to certified passengers.
- Ferry Service: Through a contracted service provider, HRT provides ferry service on the Elizabeth River between downtown Norfolk and Olde Town Portsmouth. The ferry begins at Waterside in Norfolk, with two stops in Portsmouth at High Street and North Landing. Seasonal service is provided during the Norfolk Tides minor league baseball games.
- Light Rail Service: HRT operates the first light rail transit (LRT) system in Virginia. Called The Tide, the 7.4 mile LRT system runs from downtown Norfolk to the Norfolk/Virginia Beach border.

Each bus contains a bicycle rack that accommodates two bicycles and bicycles are allowed on the light rail vehicles.

Please refer to Section 1.6 regarding peak vehicle requirements.

### **Bus Stops and Shelters**

There are approximately 3,500 stops in the HRT system. HRT has primarily relied on jurisdictional requests and funding from each jurisdiction for the placement of the limited number of shelters that have been installed. Shelters have a bench and trash cans. As of September 2011, 199 stops have shelters.

In 2009, HRT completed a Comprehensive Operational Analysis (COA). As a part of the COA, stops were ranked by boarding activity and stops with at least fifty boardings were identified as locations to place shelters. Shelters have been placed with ADA accessible locations as a priority.

As will be described within the TDP, HRT is in the process of establishing a comprehensive bus shelter program for the first time. Shelter criteria may vary based on the funding source available to pay for the shelter purchase. In addition the varied land use and service levels in HRT's service area may necessitate different boarding levels to warrant a shelter.

## **Funding**

HRT has no dedicated revenue source. Funding for services is provided with federal, state, and local funding provided by member jurisdictions and farebox revenues. Local funding is provided based on the Cost Allocation Agreement- each city establishes how much service will be provided within its borders based on how much it is willing to pay for those services after all federal, state, and farebox revenues are applied. This means that the numbers of routes, service frequency, and service coverage areas as operated by HRT are determined in each city during the annual budgetary cycle. Article IV of HRT's Cost Allocation Agreement describes how transit service in the HRT service district is determined.

### **ARTICLE IV**

#### **PROVISION OF PUBLIC TRANSPORTATION SERVICES**

- A. The Commission will own and operate the consolidated regional public transportation system within and between the Participating Cities.
- B. The Commission recognizes the service provided by local contract carriers and other transportation companies and will attempt to foster continuation and improvement of services provided by these private companies.
- C. Each year, as part of the budgeting process, the Commission will propose a public Transportation Service Program (TSP) for the region. The TSP will contain a description of service such as route name, hours of service to be provided, estimated cost, estimated revenue and estimated city share of the cost of service. The TSP will identify the service program of each Participating City and its contribution based on estimated costs and revenues.
- D. Each Participating City will review its portion of the TSP and recommend revisions where appropriate. After each Participating City has approved funding of its portion of the TSP, the Commission will approve and publish the TSP as the Transportation Service Program of Hampton Roads.
- E. Each Participating City will determine the type, amount and location of public transportation services for which it provides funds within its borders. Each Participating City, by approving its portion of the TSP, agrees to pay monthly in advance its portion of the administrative, capital and net operating costs of the Commission's approved TSP.
- F. Each Participating City will have final determination on the type, amount, and location of public -transportation service provided within its borders. Nothing in this Agreement will be construed as a requirement that a Participating City must provide public transportation services.
- G. The Commission will provide the transit service contained in the TSP as approved by each Participating City and each city will finance its share of net capital and operating costs incurred by the Commission in providing transportation services contained in the approved TSP.
- H. Additions, deletions, or revisions to the TSP may be proposed at any time by a Participating City by letter from the City Manager or his designated representative to the Executive Director of the Commission. Changes may also be proposed at any time by the Commission by letter from the

Executive Director or his designated representative to the City Manager of a Participating City. If the change is to be implemented during the year of the previously approved TSP and increases the total In Service Hours for the Participating City, no federal or state public support funds already allocated will be applied to that service until that service is included in the annual TSP and budget.

- I. Whenever an addition, deletion, or revision to the TSP is proposed, the Commission will develop an estimated cost of the proposed change. The estimated cost will be furnished to the Participating City or Participating Cities affected by the proposed change.
- J. The Participating Cities will review and approve all proposed changes and estimated costs of the TSP before implementation by the Commission. The TSP will be revised to incorporate all changes approved by the Participating Cities. If no response is made by the City Manager or his designated representative before or at the public hearing, in the case of a change requiring a public hearing, or within 15 days before implementation in the case of a minor change, the Commission will assume that there are no objections to the service changes and will proceed.
- K. Any capital cost or operating cost liability incurred by the Commission as a result of a reduction of transit service requested by a Participating City will be paid by the Participating City requesting the reduction until such time as the liability is relieved.

## 1.5 Fare Structure

HRT has not had a fare increase in its base cash fare of \$1.50 since the merger of Pentran and TRT in 1999. In 2008, a day pass was introduced that allows unlimited daily rides on all of HRT's services. In 2008, HRT introduced MAX service, a limited stop, premium service that charges a higher fare. The fee for Handi-Ride is \$3.00 for one-way service. The VB Wave seasonal service costs \$1.00. As shown in the information below, the base for HRT's fixed route local bus service and the light rail service are the same.

Fare Type	Price
<b>Fixed Route Local Bus/Light Rail Fare</b>	
Adult	\$1.50
Youth (under 18, ID may be required)	\$1.00
Seniors and Persons with Disabilities	\$0.75
Child (under 38" tall)	Free
<b>Passes</b>	
GO 1-Day Pass	\$3.50
GO 1-Day Bundle of Five	\$16.50
GO 1-Day Pass (Youth, Senior and Persons with Disabilities)	\$1.75
GO 1-Day (S,D,Y) Bundle of Five	\$8.75
GO 7-Day Pass	\$17.00



<b>Fare Type</b>	<b>Price</b>
GO 30-Day Pass	\$50.00
GO 30-Day (Youth, Senior, Persons with Disabilities)	\$35.00
<b>MAX Express Service</b>	
Single	\$3.00
Seniors and Persons with Disabilities	\$1.50
Children (under 38")	Free
1-day pass Expires 2 am the following day – unlimited rides, no additional fare required, non-transferable, for use on all other HRT services, except on Handi-Ride. Single passes may only be purchased on board the MAX.	\$5.50
1-Day Bundle of Five	\$24.75
30-day pass Expires 30 days from first use – unlimited rides, no additional fare required – non-transferable, for use on all other HRT services, except on Handi-Ride.	\$95.00

## 1.6 Fleet

The HRT fleet inventory as of August 1, 2011 consisted of 302 vehicles, including 255 diesel buses, 37 hybrid buses and 10 trolley-style buses. The majority of the fleet, a total of 280 buses, were manufactured by Gillig. The HRT fleet also includes 12 Optima buses and 10 Trolley-style buses manufactured by Chance. HRT acquired 11 Gillig hybrids in June 2011 to replace the Chance trolleys.

In addition to the buses listed above, HRT has three ferries, with two operating in the peak periods. HRT has nine light rail transit vehicles, with six required during the peak periods. HRT owns a total of 33 paratransit vans. HRT is also leasing an additional 54 paratransit vans from its contractor to meet service requirements. HRT owns 74 vanpool vehicles for its Trafix Vanpool Program.

Chapter 3 provides additional information on the active bus fleet and Chapters 4 and 6 provide details on the vehicle replacement plan, not only for buses but also for paratransit vans, non-revenue support vehicles, and vanpool vans.

## 1.7 Existing Facilities

### Administrative

- 1500 Monticello Avenue (15<sup>th</sup> Street), Norfolk:
  - Built in 1960 (approximate date) as a car dealership; purchased by HRT's Southside predecessor in the 1970s as an administrative and limited maintenance facility for non-revenue vehicles

- HRT is currently building a new administrative facility. Once this opens, the current facility will become part of private-public venture and will be redeveloped by the project developer.
- Headquarters, 3400 Victoria Boulevard, Hampton:
  - Serves at HRT's Administrative headquarters
  - Built by Pentran in 1983
- New Administrative Facility at 18<sup>th</sup> Street:
  - Under construction
  - Anticipated occupancy April 2012
  - Anticipated to house 100-125 administrative staff

### **Maintenance**

- Southside Maintenance and Operations Facility:
  - Opened May 2011
  - Number of repair bays: 17
  - No of Fuel Stations: 3
  - Training Rooms: 2
  - 7000 square feet for storage and inventory
- Headquarters, 3400 Victoria Blvd, Hampton:
  - Number of repair bays: 11 and 4 body shops
  - Number of fueling stations: 1 with 2 pumps
  - Number of training rooms: 1
- HRT Virginia Beach Operations Facility
  - Number of repair bays: 4
- HRT Norfolk Tide Facility
  - Serves 9 LRT Vehicles
- HRT Rail Operations (Mangrove)
  - Used for storage and administrative offices
  - Five year lease

### **Major Transfer Centers**

- Cedar Grove:
  - Salter and Princess Anne Roads, Norfolk VA
  - Serves routes 1, 2, 3, 4, 6, 8, 9, 11, 13, 17, 18, 20, 23, 44, 45, 960, 961,
  - 10 shelters
  - Owned by City of Norfolk

- Wards Corner
  - Serves routes 1, 15, 961
  - 4 Shelters
  - Owned by HRT
- Hampton Transfer Center
  - King & Pembroke, Hampton VA
  - Owned by HRT
  - 8 Shelters
  - Serves routes 101, 102, 103, 109, 110, 114, 115, 117, 118, 120, 961, 963
  - Public restrooms
  - Parking
  - Also served by Mega Bus and Greyhound Bus
- Newport News Transfer Center
  - Washington & 34th, Newport News, VA 23607
  - Public restrooms
  - 8 shelters
  - Parking
  - Serves routes 101, 103, 104, 105, 106, 107, 112, 961, 967
  - Owned by HRT
- NET Center
  - 5200 Mercury Boulevard, Newport News, VA
  - Serves routes 104, 112, 114
  - 2 shelters
  - Owned by HRT
- Victory Crossing
  - McLean St/Cavalier Blvd in Portsmouth
  - Serves routes 41, 44, 45, 50, 57, 962
  - 6 Shelters
  - Under lease agreement with City of Portsmouth
- HRT Suffolk Operations Facility
  - 866 Carolina Road Suffolk, VA 23434
  - Serves routes 71, 72, 73, 74
  - Owned by the City of Suffolk

#### **Park and Ride Lots**

- HRT Silverleaf Transportation Center
  - Served by routes 960 and 918/919
  - 3 bus shelters
- Indian River Park and Ride Lot
  - Owned by Virginia Department of Transportation
  - Served by routes 12, 922, and 967

### **Ferry**

- 4 docks
  - Waterside
  - High Street
  - North Landing
  - Harbor Park (only used on Norfolk Tides baseball games)
- 3 vessels owned by HRT; Contracted service
- Parking facility in Portsmouth; Owned by City of Portsmouth

### **Bus stops**

- Approximately 3,500 bus stops

### **Bus Shelters**

- 199 shelters owned and maintained by HRT

### **Bicycle facilities**

- All buses include bicycle racks; light rail service accommodates bicycles on-board

### **The Tide Light Rail**

- 7.4 miles
- 9 LRT vehicles
- 11 stations
  - EVMC/Fort Norfolk
  - York Street/Freemason
  - Monticello
  - MacArthur Square
  - Civic Plaza
  - Harbor Park (176 spaces dedicated to patrons of The Tide)
  - Norfolk State University (NSU)
  - Ballentine/Broad Street (105 parking spaces)
  - Ingleside
  - Military Highway (232 parking spaces)
  - Newtown Road (266 parking spaces)
    - Over-flow parking at leased facilities at Newtown Road station is also available.

## **1.8 Transit Security Program**

HRT has completed a System Security and Emergency Preparedness Plan (SSEPP) that has been reviewed and approved by the Virginia Department of Rail and Public Transit (VDRPT) as well as the Federal Transit Administration (FTA). The SSEPP establishes methodologies for threat and vulnerability assessments for the LRT. HRT also has a security plan for buses and ferry;

The plan delineates security practices for HRT's security contractors, off-duty police officers working for HRT, and all pertinent safety and security employees. HRT has one special conservator of the peace who acts as the security manager for HRT and manages both the security contractor and off-duty

officers. HRT has over twenty security contractors and employs the services of approximately 40 off-duty police officers.

Two safety/security drills are required annually by FTA and VDRPT on the light rail system; five were conducted prior to the start of revenue operations. Each HRT transit vehicle (bus, rail, and ferry) is equipped with CCTVs and DVR capabilities. Each vehicle has security features to enable the driver or operator to contact dispatch for emergency situations, as well as contact local police enforcement. LRT stations have emergency call boxes that call directly into the City of Norfolk's 911 system. There is also safety and security training for new employees; all of the operator and driver curriculums include safety/security training.

HRT is committed to promoting safety through education and has designed several public education campaigns and strategies to disseminate our safety message. The communication strategies used reflect the public outreach efforts to inform and educate the community on how to interact safely with The Tide's tracks, station areas, and vehicles.

## **1.9 Public Outreach**

The following describes HRT's public outreach and involvement process including outreach relative to service expansion and reduction:

### **Standard Operation Procedure for Public Participation Process:**

Public hearings are required by the Federal Transit Administration (FTA). The public hearing process provides for an open exchange of information and ideas between the public and the TDCHR.

### **Purpose:**

To fulfill FTA requirements; including Triennial Review, to establish guidelines to inform passengers of upcoming changes to routes and/or changes in fare structure.

### **FTA Requirements (Fare and service change regulations, contained in 49 CFR 635.7 & 635.9):**

- The public hearing requirement only applies when grantees intend to increase the basic fare structure or decrease service. The law does not require that fare decreases, service increases, or "special fares" be preceded by public comment. For service decreases, the requirement only applies to "major service decreases."
- Title VI analysis is required for all major services changes. A major service change is any fare change and any service change of 25% or more in transit vehicle miles or 25% or more of service hours of a route. This can be an increase or a reduction.

### **Threshold for "Major" Service Changes**

- Total elimination of a route.
- A service change (either increase or decrease) of 25% or more of transit vehicle miles or 25% or more of service hours of a route.

**Chapter 1 Appendix**  
**HRT Organizational Charts**

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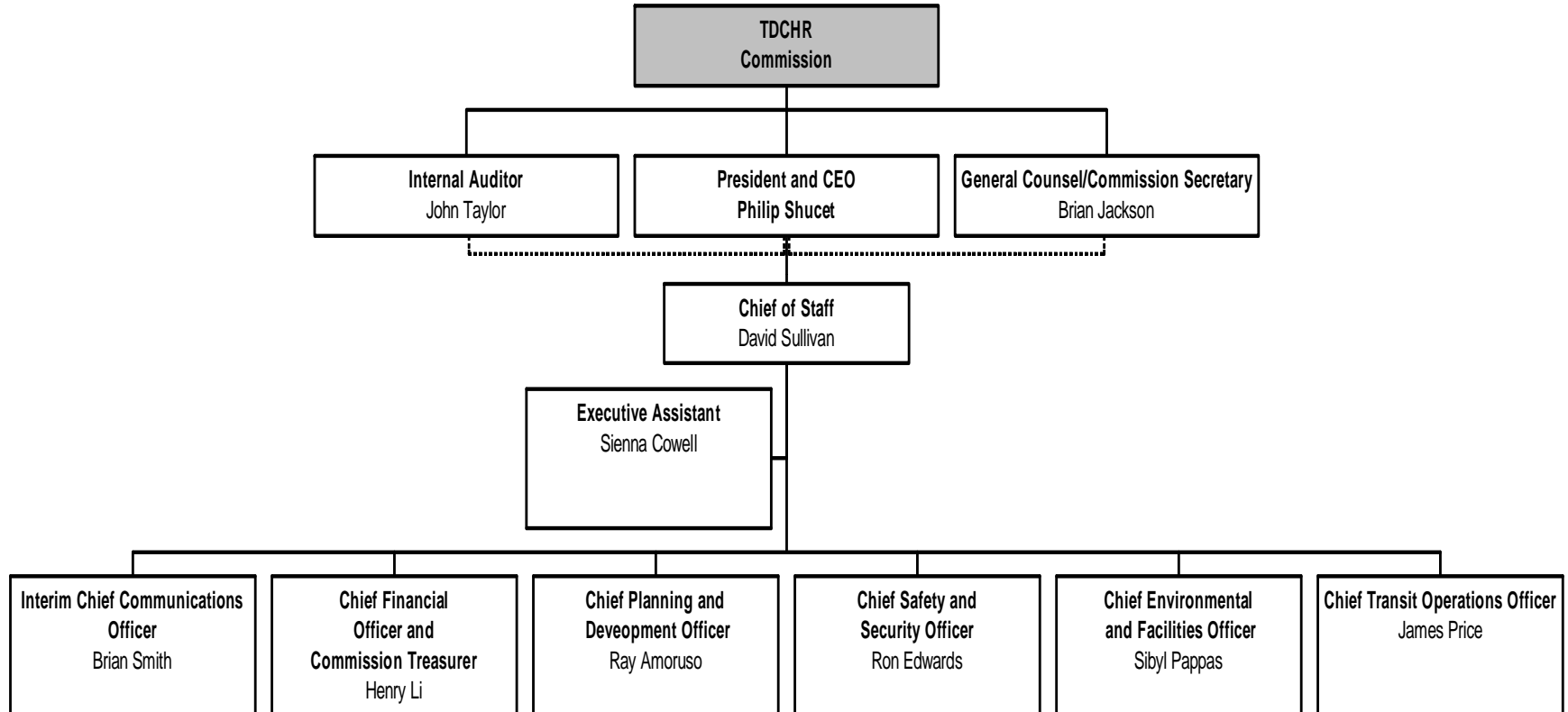
# Organizational Chart

November 1, 2011



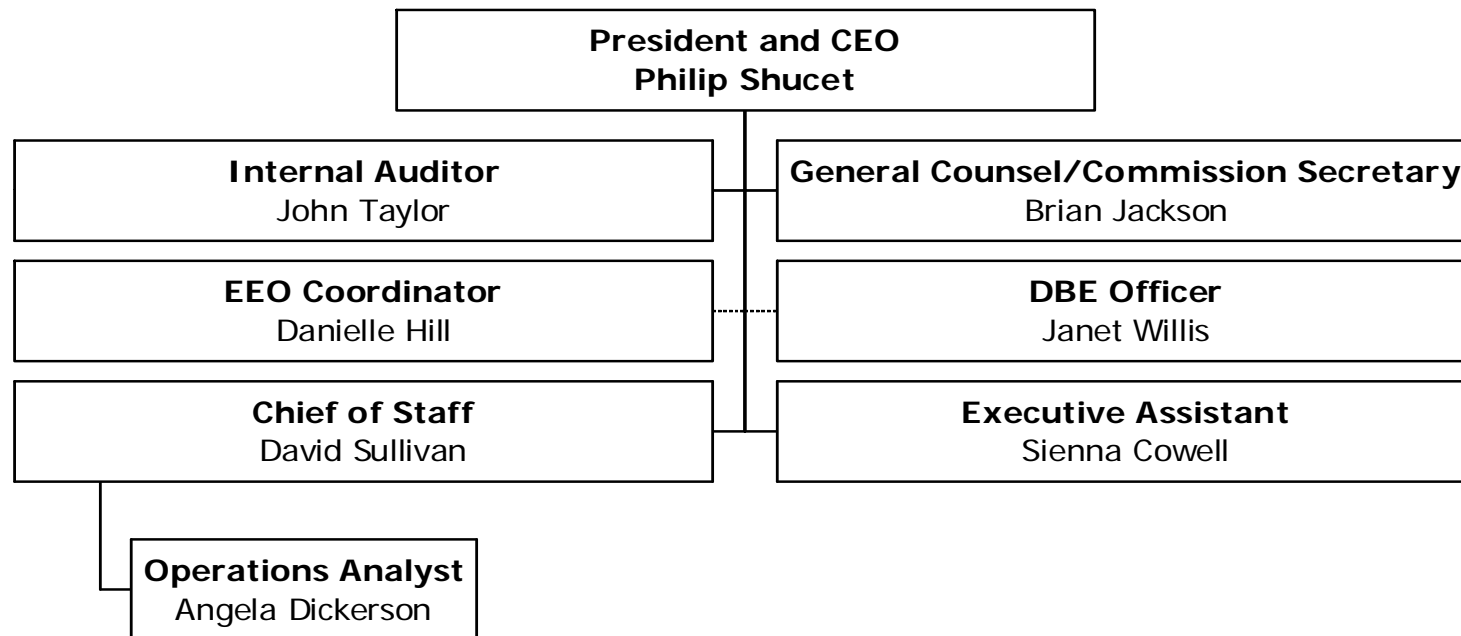


# Hampton Roads Transit Transportation District Commission of Hampton Roads Organizational Chart



# Executive Department

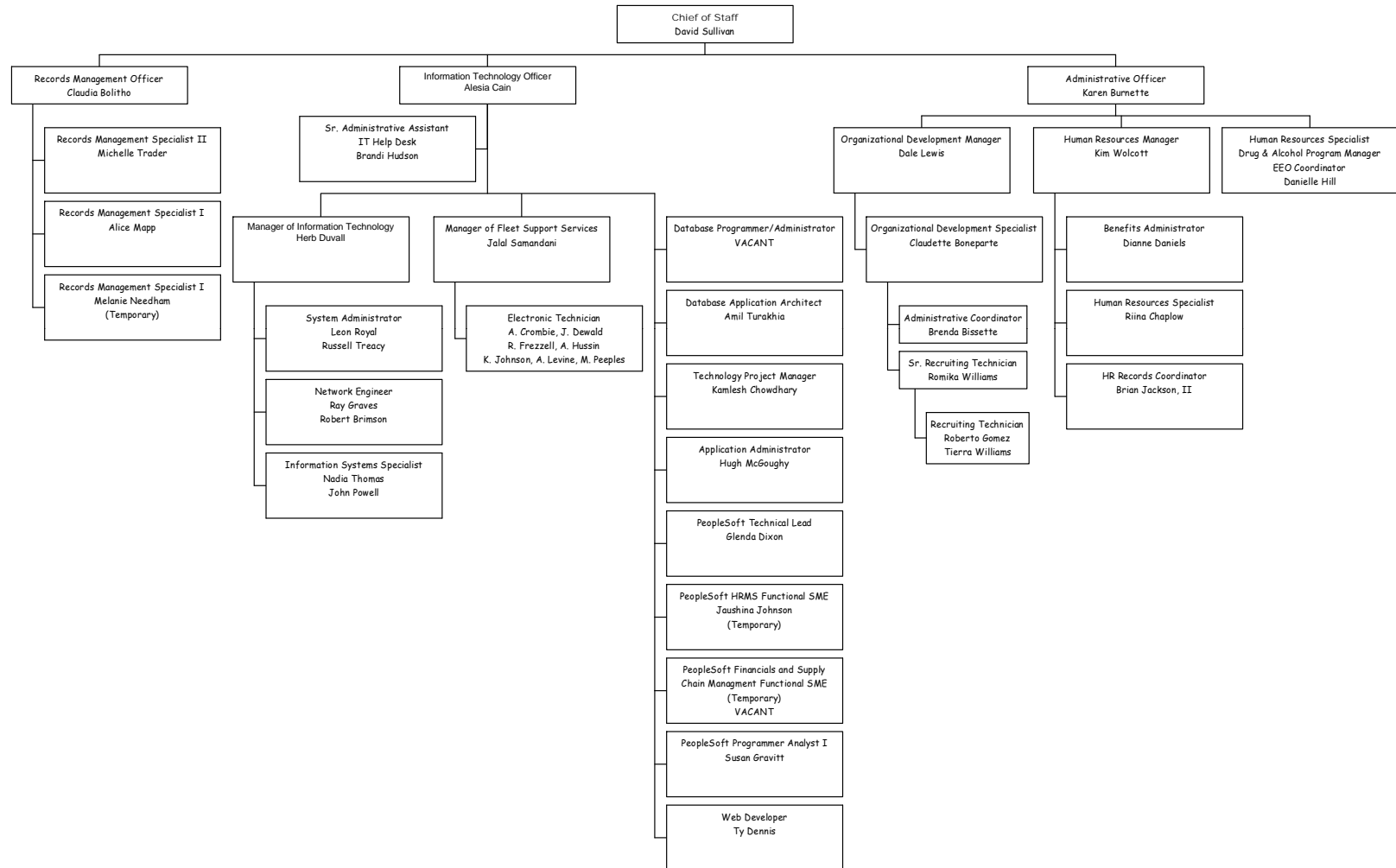
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Note:

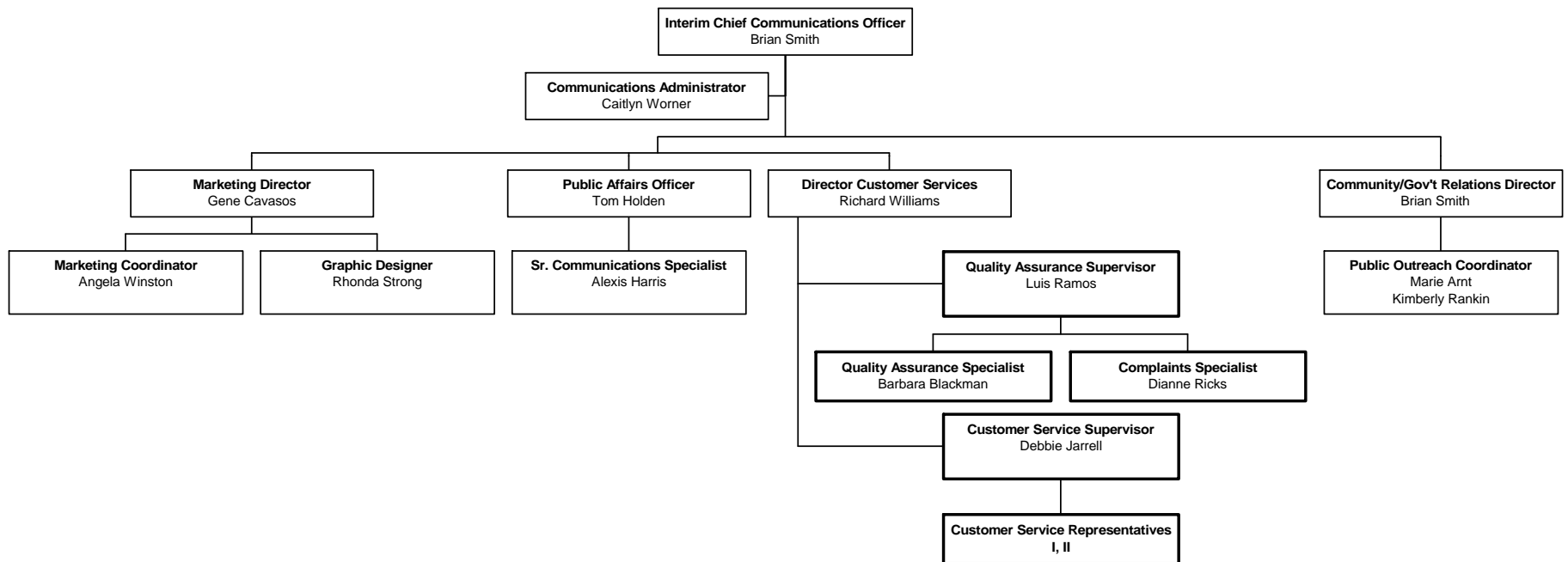
The DBE Officer and EEO Coordinator are shown as having dotted line reporting to the President and CEO for any compliance issues in their respective areas.

# Administration and Technology



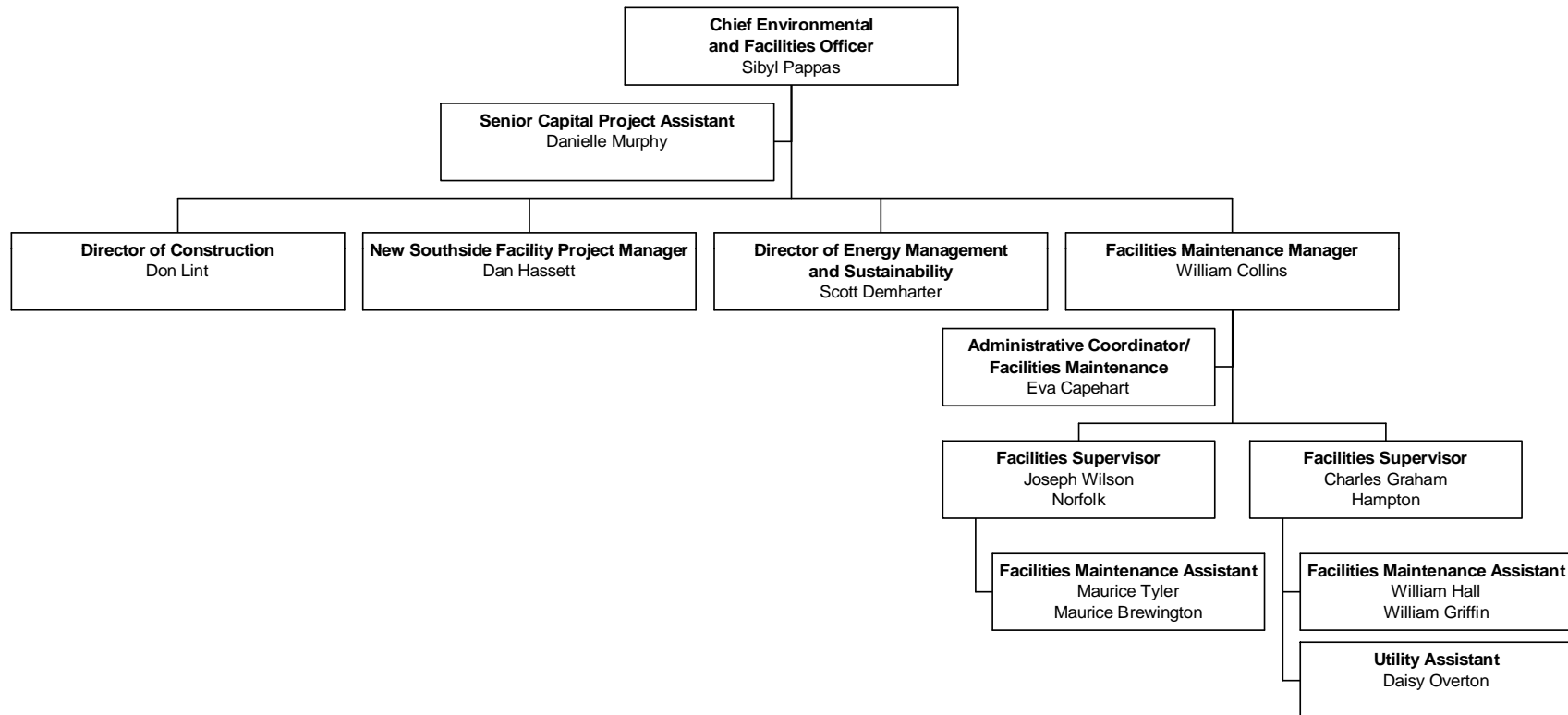
# Communications Department

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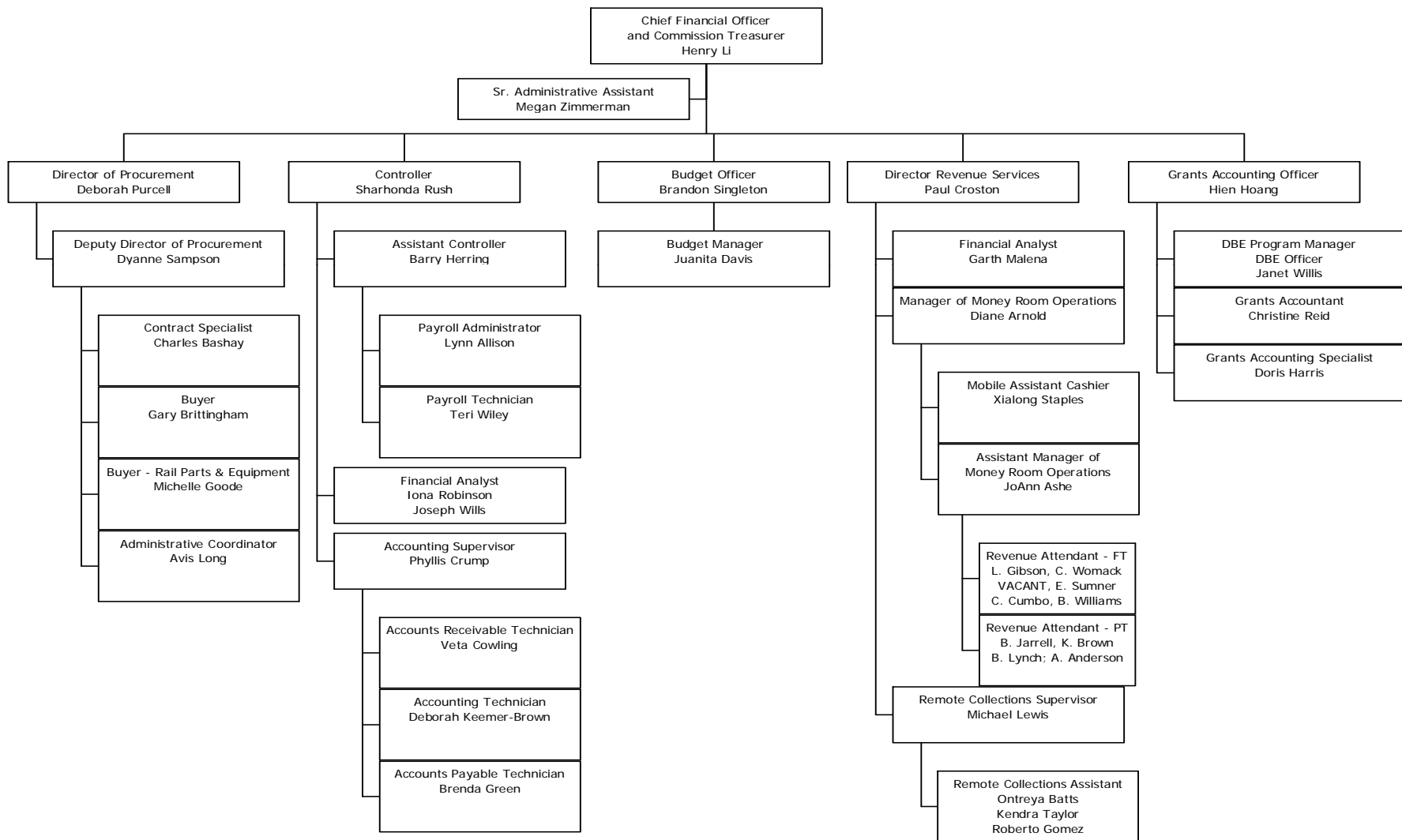


# Environmental and Facilities Engineering

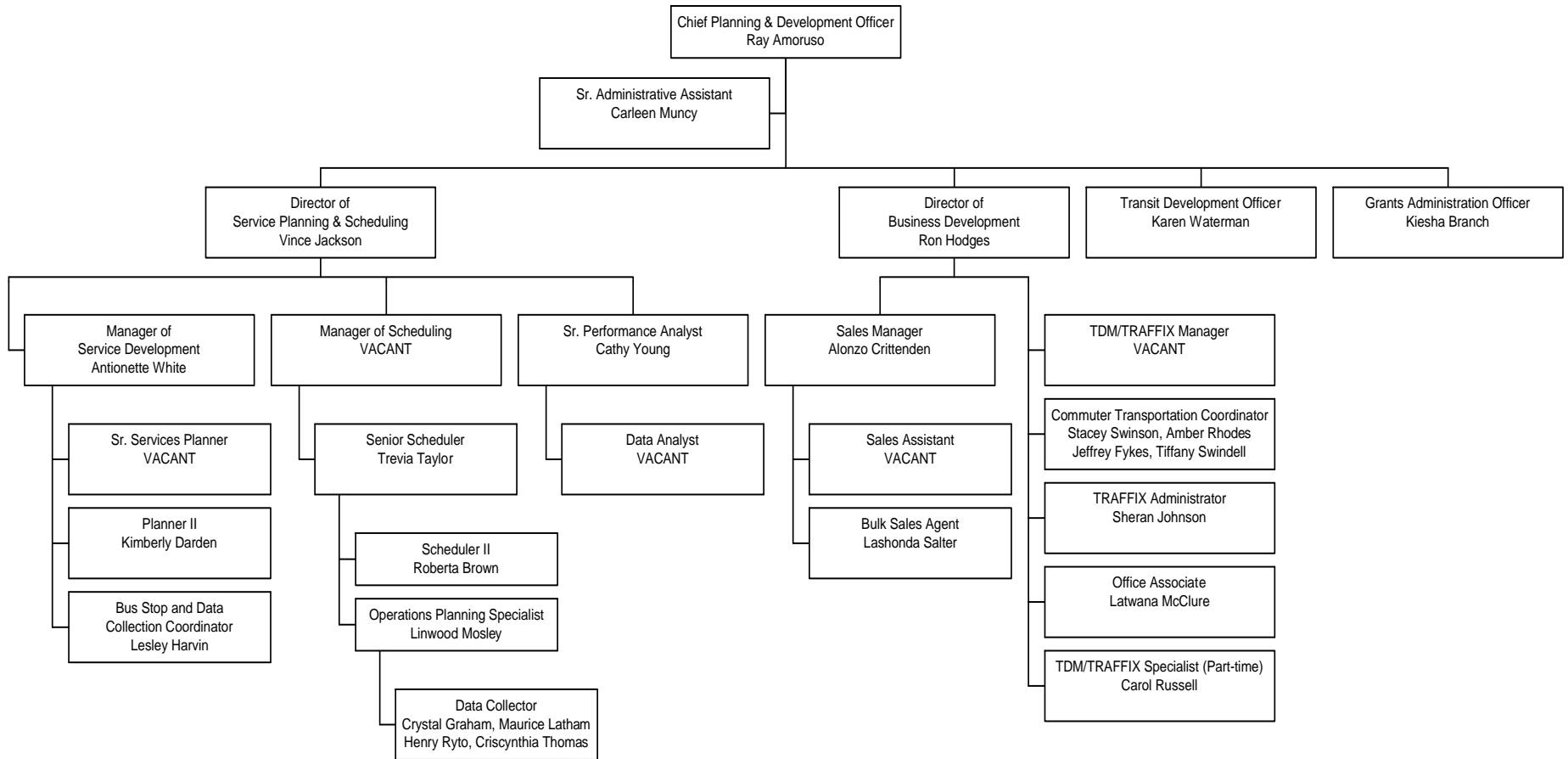
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# Finance Department

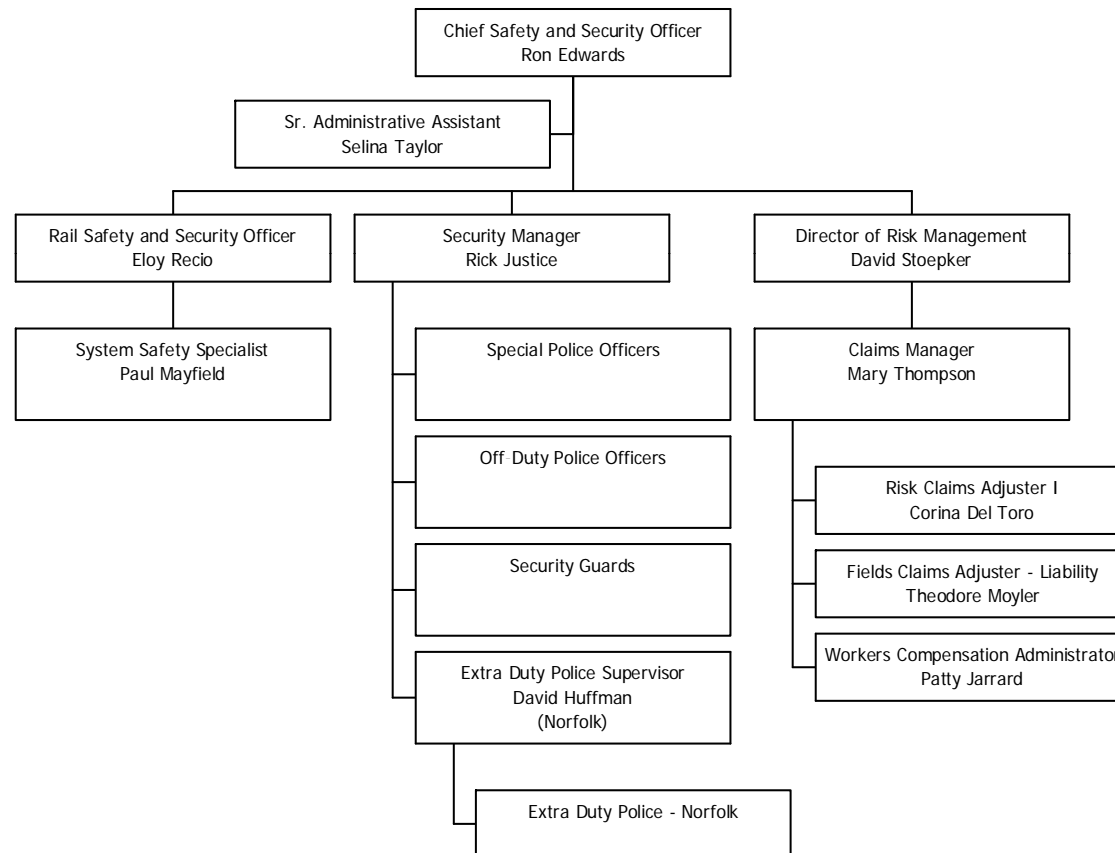


# Planning and Development Department



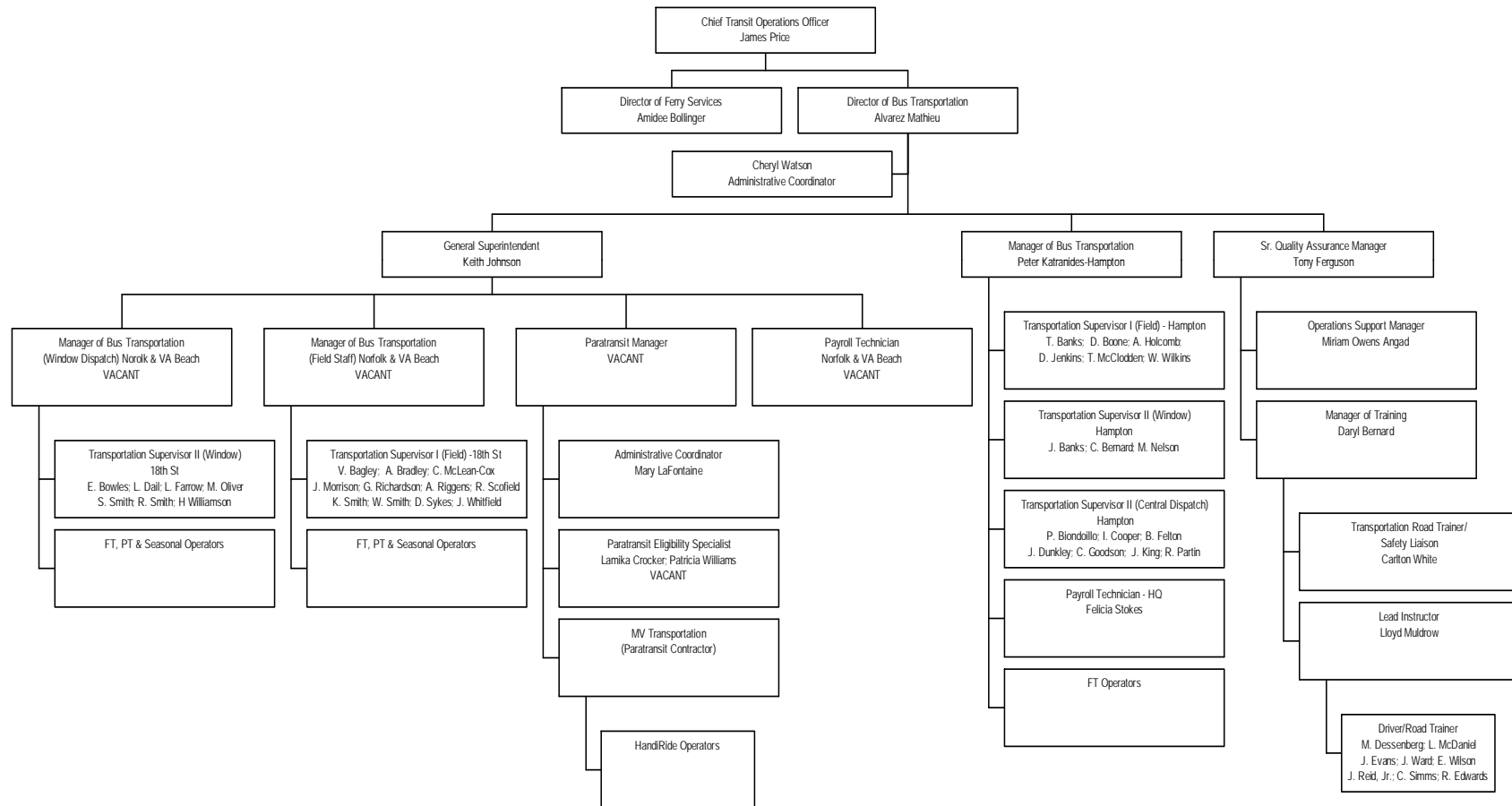
# Safety and Security Department

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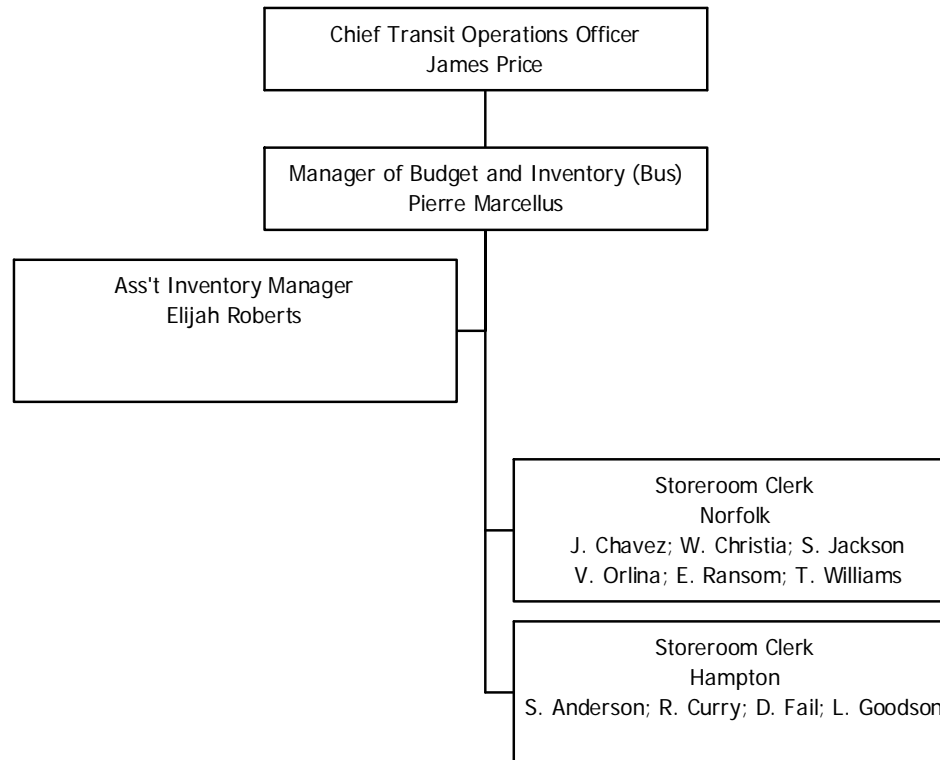


# Bus and Ferry Transit Operations Department



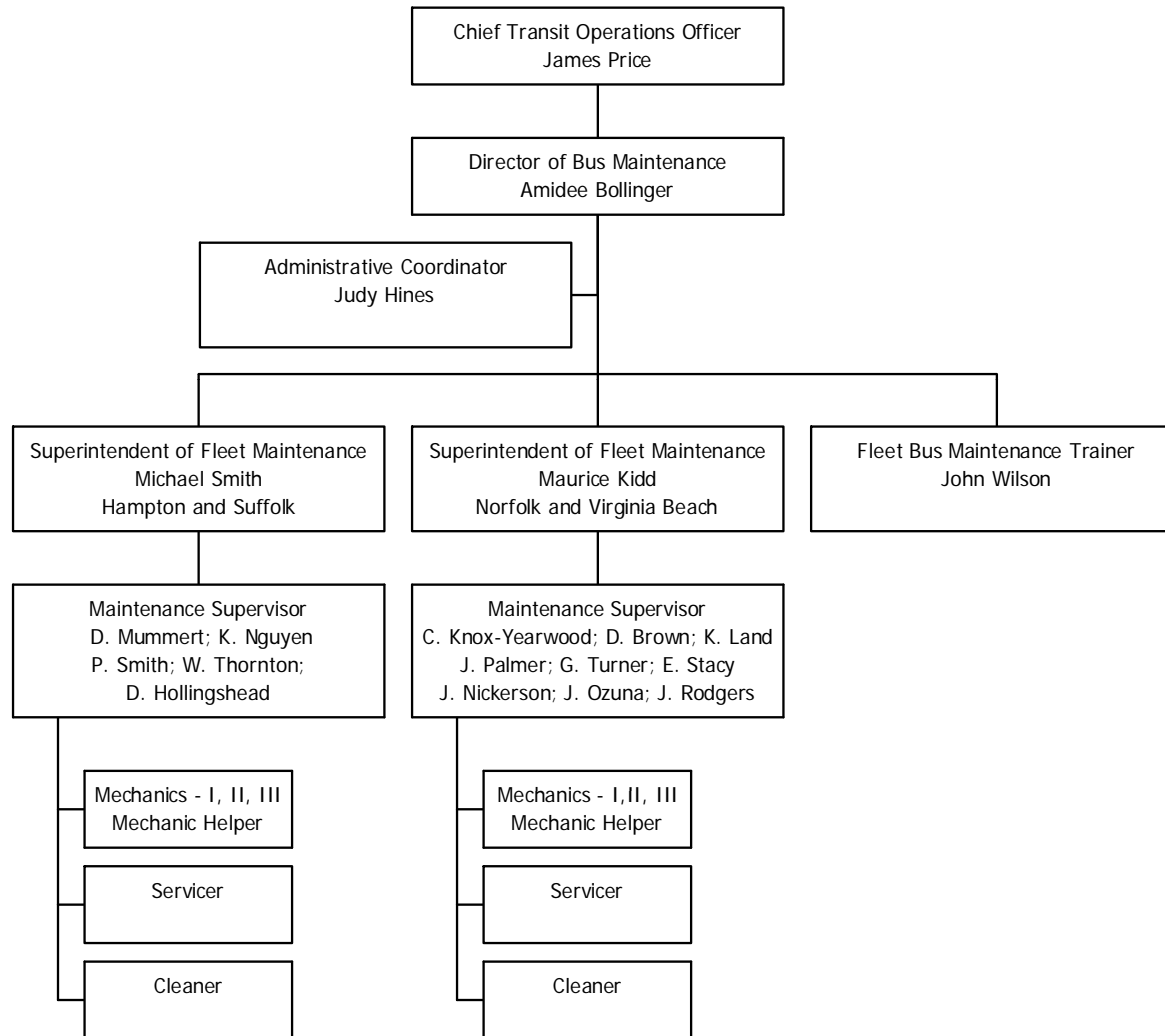
# Transit Operations Department Inventory Services

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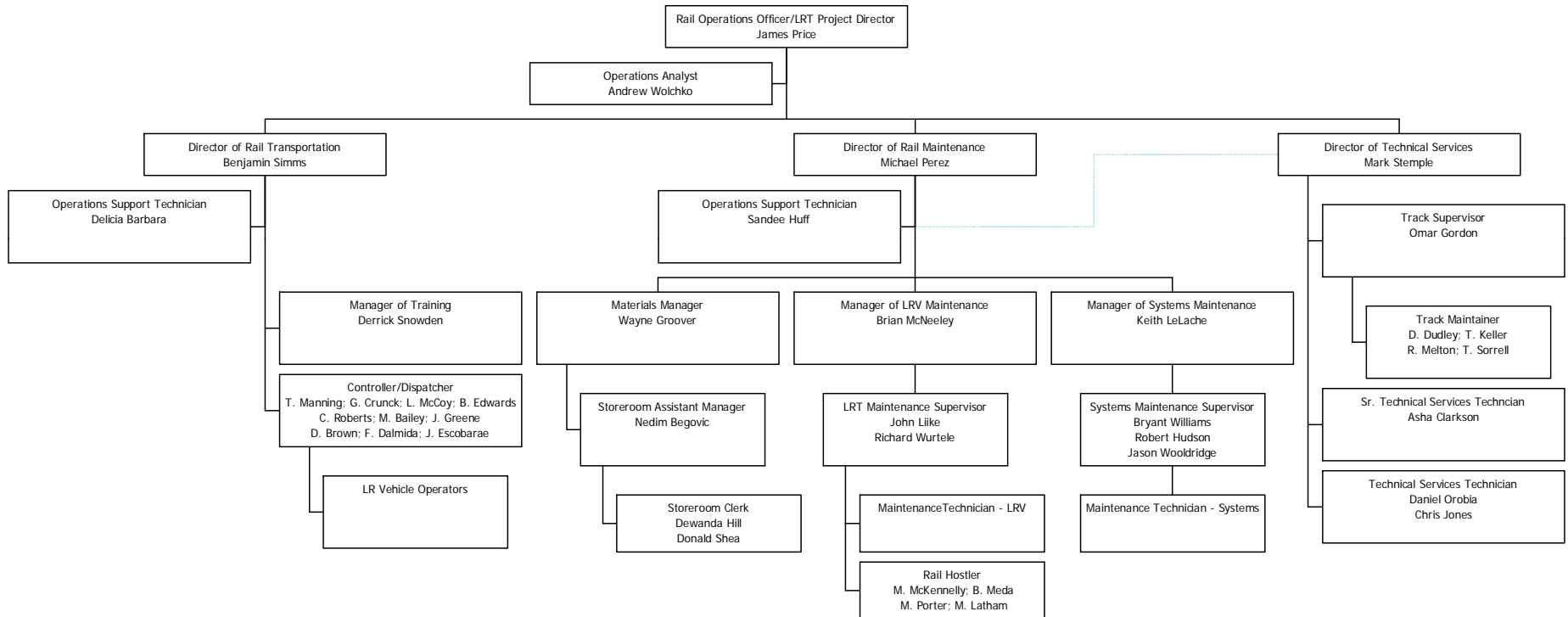
# Bus Maintenance Operations Department

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# Rail Transportation and Maintenance

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## 2 GOALS, OBJECTIVES AND STANDARDS

### 2.1 Introduction

This chapter provides an overview of HRT's strategic planning process and the resulting vision, mission, goals and objectives. While the agency's vision and mission were recently refined as part of the 2011 Hampton Roads Vision Plan, the agency had several different iterations of goals and objectives, which were refined during the TDP process. In addition, the TDP recommends a series of performance measures and standards for HRT to use, both those that will be utilized in the analysis portions of the TDP and those that will be useful in ongoing monitoring of service delivery.

HRT initiated a strategic planning process in 2008 to outline its future direction and create clearly defined objectives to enable better decision making. The plan served as a roadmap for the organization's success in the future as a provider of regional transportation services; however, HRT is using the Transit Development Plan as an opportunity to update those and assign performance measures and standards to the objectives.

The following working definitions for are used to assist the development of this portion of the TDP:

**Goals:** A goal is a broad statement of what the agency hopes to achieve and is qualitative in nature.

**Objectives:** Objectives are specific, achievable, measurable statements of what will be done to achieve goals within a defined time frame often one year or less. Objectives are achieved through work plans.

**Performance Measures:** Quantitative or qualitative characterization of performance that are used to evaluate progress toward objectives. They quantify the agency's efficiency or effectiveness in conducting business operations. For example, number of boardings per hour on a bus route is a performance measure.

**Performance Standard:** The level that the performance measure should meet so that the objective is met. For example, 25 boardings per hour on a bus route represents a performance standard.

### 2.2 Vision and Mission

The Hampton Roads area and HRT have a vision and mission that are supported by the agency's goals and objectives.

The region's vision for transit is articulated as follows in the 2011 Hampton Roads Regional Transit Vision Plan:

*An integrated public transit network will provide Hampton Roads with transportation choices, thereby ensuring greater mobility, economic development, environmental protection, energy independence, and quality of life.*

HRT also has an earlier established mission statement, developed as part of the agency's 2008 Strategic Plan:

*Our mission is to serve the community through high quality, safe, efficient and environmentally friendly regional transportation services.*

## **2.3 Goals and Objectives**

The HRT goals and objectives were formulated around the vision and mission statement and around the concept of establishing objectives that are specific, achievable, and measurable. A number of sources were utilized to develop the goals and objectives section of this report, specifically the Hampton Roads Regional Transit Vision Plan, Final Report, February 2011 and the Comprehensive Operations Analysis, Draft Final Report, August 2009. HRT also had a previously adopted Business Plan and Strategic Plan from 2008; this TDP provides the opportunity for the development of updated goals and objectives for the agency, along with performance measures and standards that have not been utilized to date. This updated set of goals and objectives were developed and vetted with HRT staff and shared with several stakeholder groups involved in the TDP, namely the Mobility Working Group and the Transit Riders Advisory Committee. The goals and objectives for HRT have been identified as:

### ***Goal 1: Make Hampton Roads Transit a transportation provider of choice in the region.***

- Objective 1.1 Provide a high quality service through increased service frequency, reliability, and service that addresses multiple trip purposes.
- Objective 1.2 Provide high quality customer service through the call center and other customer interaction.
- Objective 1.3 Improve the image of public transportation in the region.
- Objective 1.4 Ensure that public information regarding HRT service is transparent and widely available.

### ***Goal 2: Support the coordination of transportation planning with land use to promote regional economic sustainability and livability.***

- Objective 2.1 Promote HRT's role as a mobility manager to improve regional connectivity.
- Objective 2.2 Integrate HRT's service planning efforts with other local and regional plans.
- Objective 2.3 Support transit-supportive and transit-oriented development within mixed-use activity centers and corridors.
- Objective 2.4 Support economic growth and regional competitiveness by connecting major activity and employment centers via direct, high frequency transit.
- Objective 2.5 Reduce energy consumption, improve air quality, and mitigate climate change impacts by utilizing renewable energy sources wherever possible.

***Goal 3: Achieve financial stability and efficiency***

- Objective 3.1 Maximize the value of service that can be provided with the financial resources available, in terms of ridership and utilization.
- Objective 3.2 Be fiscally responsible by continuously monitoring capital and operating expenditures with respect to projections and make the required adjustments.
- Objective 3.3 Follow and regularly evaluate business practices that ensure transparency for HRT's funding partners, stakeholders, and customers.
- Objective 3.4 Maintain a simple fare structure that is regularly evaluated based on HRT's fare policy.
- Objective 3.5 Establish a reliable independent funding source to enable HRT to provide efficient regional and local services.
- Objective 3.6 Provide financially sustainable paratransit service.

***Goal 4: Improve capital asset management and maintain state of good repair for all assets and facilities.***

- Objective 4.1 Maintain the replacement schedule and quality of rolling stock.
- Objective 4.2 Accelerate the schedule for facilities repair and replacement.
- Objective 4.3 Perform routine inspections of vehicles, stations, and facilities.
- Objective 4.4 Reduce and eliminate the use of preventative maintenance funds for operations.

***Goal 5: Develop and maintain a workforce that is highly qualified, efficient, and motivated by excellence.***

- Objective 5.1 Retain professional, diverse, and skilled employees
- Objective 5.2 Develop opportunities for continuous training for all levels and functions of employees (both labor and administrative).
- Objective 5.3 Develop career paths that are clear and allow for professional growth.
- Objective 5.4 Promote accountability and sustainability.

***Goal 6: Make Hampton Roads Transit safe and secure for customers and employees.***

- Objective 6.1 Include security as an element in all facilities, capital assets and operations.
- Objective 6.2 Promote a safety culture in the workforce.



## 2.4 Performance Measures

Performance measures are designed to address both the efficiency and effectiveness of the services provided by HRT and should be specific, measurable and quantified where feasible. A number of sources were utilized to develop the standards section of this report including:

- HRT Performance Dashboard
- HRT Norfolk LRT Final EIS
- HRT Fiscal Year 2011 Budget
- HRT Fiscal Year 2012 Budget
- HRT Service and Schedule Efficiency Review
- Comprehensive Operations Analysis for HRT

### *Performance Dashboard*

The Performance Dashboard is part of an initiative HRT launched in April 2010 to improve the transparency in government. The dashboard, found at <http://www.gohrt.com/dashboard/> is designed to share with the public important facts about HRT operations and construction projects. The new Performance Dashboard presents the basics of HRT's key areas of business performance. Visitors can now assess how well HRT is managing its operating and capital budgets, construction projects, customer service performance, or gauge the on-time performance and ridership on the agency's bus network.

The Performance Dashboard includes the following five areas:

- Operating Budget (year-to-date vs. actual expenditures)
- Construction Project Expenditures (planned vs. actual)
- Ridership (current month vs. previous year)
- Customer Service (percent answered calls)
- On-Time Performance (current month percent on-time)

While many of the performance measures that have been developed as part of the TDP take advantage of the information provided through the Dashboard, the new measures add additional ways to measure performance that can be used to better evaluate the services that HRT provides.

The tables on the following pages list and describe all of the performance measures that have been developed as part of the HRT TDP. Table 2.1 is made up of performance measures that will be used within the TDP to determine how current service performs and to ascertain how proposed service changes are anticipated to perform. While the measures are critical in the TDP analysis, they will also be useful for HRT in monitoring its performance moving forward. The TDP performance measures have been divided into two categories: TDP Analysis Design Measures and TDP Analysis Performance Measures. The first category relates to service design and will be used to measure how well the current HRT system matches service delivery objectives in terms of route coverage and route frequency. The second category is used to evaluate the existing transit service that HRT operates (and proposed future service) and how each service offering performs.

Table 2.2 shows measures that are not used in the TDP, but can and should be used by HRT in evaluating the agency's performance over time. These measures have also been divided into two categories:

Ongoing Performance Measures and Long-Term Agency Sustainability Measures. Ongoing performance measures would be used to measure customer service, financials, and vehicle performance, similar to the current Dashboard. Long-term agency sustainability measures encompass a broad range of measures that provide insight into the strength of the agency and its transit services.

## **2.5 Standards**

Tables 2.1 and 2.2 also provide standards that the performance measures should meet. The performance measures result in a number of qualitative descriptions of how the agency or service rates on a given performance measure, but without adopted standards, it is impossible to know if the agency is doing well on a particular measure. To the extent possible, standards were assigned based on an internal comparison; for example, rather than setting a hard number for passengers per revenue hour, the standard is 50% of the system average. This indicates that each route should have at least 50% of the system average passengers per revenue hour in order to be considered viable. In cases where an internal comparison is not appropriate, a hard number has been selected, such as 50% of the population has access to high frequency service.

Use of the long-term performance measures and standards, and how HRT should measure itself and continuously monitor its performance, is discussed in Chapter 8 of the TDP.

**Table 2.1 Performance Measures Used in the HRT Transit Development Plan**

Number	Performance Measure	Related Objectives	Parameters	Standard
<b>TDP ANALYSIS DESIGN MEASURES</b>				
<b>1</b>	Percentages of service area population that have access within 1/4 mile* to any service and to high frequency service	1.1	15-minute headway= high frequency	85% any service 25% high frequency service
<b>2</b>	Percentages of service area employment that have access within 1/4 mile to any service and to high frequency service	1.1	15-minute headway = high frequency	85% any service 50% high frequency service
<b>TDP ANALYSIS PERFORMANCE MEASURES</b>				
<b>3</b>	On-time performance as percent of total trips and by route	1.1	Current standard: on-time ≤ 5 minutes late.	85% system average 75% route level
<b>4</b>	Passengers per revenue hour or Passengers per trip (MAX routes) - Systemwide, by route, by time period (weekday peak/weekday off-peak/weekend)	1.1, 3.1		50% of system average (by mode by time period)
<b>5</b>	Average total ridership by trip(weekday and weekend)	1.1, 3.1	Calculated on a quarterly basis.	Minimum of 10 riders per trip
<b>6</b>	Farebox recovery for fixed-route services (Systemwide, by mode, by route)	3.1, 3.4		50% of system average by mode

\*1/4 mile is the industry standard distance to bus service (the majority of HRT's service) that indicates whether someone has easy access to transit.

**Table 2.2 Additional Ongoing Performance Measures**

Number	Performance Measure	Related Objectives	Parameters	Standard
<b>ONGOING PERFORMANCE MONITORING</b>				
<b>1</b>	Complaints per 100,000 passengers	1.1, 1.2, 1.3	Annual Average	Equal or lower than previous year
<b>2</b>	Percent answered calls	1.2	Annual Average	Equal or greater than previous year
<b>3</b>	Number of locations and different methods through which HRT service information is provided to the public	1.4	Web hits, Twitter followers, stops, transit centers	Quarterly increase in locations/methods, web traffic/followers
<b>4</b>	Number of vanpools and carpools formed by Traffix	2.1	Calculated on an annual basis	10% increase over previous year
<b>5</b>	Operating expenditures YTD anticipated vs. actual expenditures	3.2	Calculated monthly	Actual operating expenditures equal to or less than budgeted expenditures
<b>6</b>	Construction Project Expenditures (Planned vs. Actual)	3.2	Calculated monthly	Construction expenditures less than or equal to planned expenditures
<b>7</b>	Percent of days when vehicle requirement not met	1.1	Calculated monthly	Less than 5%
<b>8</b>	Percent of scheduled trips not operated (missed trips)	1.1	Calculated monthly	Less than 5%

Number	Performance Measure	Related Objectives	Parameters	Standards
<b>LONGER-TERM AGENCY SUSTAINABILITY MEASURES</b>				
9	Annual boardings	1.3	Systemwide, by mode, by route	Increase over previous year
10	Operating cost per revenue hour by mode	1.1, 3.1	Calculated on an annual basis	Increase no greater than overall inflation rate
11	Percent of operating funds provided by an independent funding source	3.5	Average percent from peer review	*
12	Per-passenger trip subsidy for paratransit*	3.6	Calculated on an annual basis	*
13	Bus Mean Distance Between Failures (MDBF)*	4.1	Calculated on a quarterly basis.	*
14	Number of road calls (revenue vehicle taken out of service)*	4.1	Calculated on a quarterly basis by mode.	*
15	Percent of facilities in good or excellent condition, by facility type	4.2	Create a letter grade system with descriptions than can cover all facilities (transit center, shelter, etc.).	Letter Grade B or better for all facilities; Letter Grade A for 80% of facilities
16	Number/percent of stops with passenger amenities (shelters, benches, trash receptacles, transit information)		Calculated on an annual basis	Increase over previous year
17	Percent of operating funding that comes from preventive maintenance funds.	4.4	Calculated on an annual basis once "actual" budget is finalized for the previous fiscal year	Decrease over previous year
18	Staff turnover rate: Administration and Union separated*	5.1	Separate retirements vs. other resignations	*
19	Percent of union employees who receive training on an annual basis*	5.2	Calculated on an annual basis	*

\* Indicates measures that require existing or historical data to develop standard

### 3 SERVICE AND SYSTEM EVALUATION

#### 3.1 Background

The evaluation of HRT's service was performed in the context of two recent planning efforts: the *Comprehensive Operations Analysis* (August 2009) and the *Service and Schedule Efficiency Study* (March 2011). These two studies covered much of the analysis that comprises the required elements of the TDP. The following sections draw considerable background from these documents, as well as from the *FY10 Summary of Ridership and Revenue* (March 2011), produced by HRT staff.

In general, the analysis in this chapter focuses on the core bus system, placing less emphasis on seasonal or specially-branded services. The VB Wave routes (numbers 30, 31, 32 and 34) perform well, but serve a narrow function to move tourists north and south on the Virginia Beach oceanfront. The NET (route 17) underwent a major change with the advent of The Tide light rail. The MAX express routes also underwent (May 2011) a significant service reduction.

#### 3.2 Land Use and Demographic Profile

The HRT service area consists of six independent cities, as listed in Table 3.1, instead of one major city surrounded by suburban areas. The region as a whole is embracing more mixed-use, higher density, transit-supportive development, notably the mixed-use town center developments in Virginia Beach and the development of Strategic Growth Areas within the city, Oyster Point in Newport News, and the Hampton town center. In addition, the resurgence of downtown Norfolk, with its more mixed-use development patterns, will also help the longer term prospects for high quality transit service. While there are pockets of density throughout the region for both population and employment, the numerous nodes present a challenge to the provision of transit service.



**Typical Land Use Outside of Downtown Areas**



**Mixed-Use Development at Oyster Point**

The change in population and the density of each city in the HRT service area are shown in Table 3.1; the weighted average population density across HRT's service area is 1,660, indicating a generally suburban land use pattern. Chesapeake and Virginia Beach are characterized by lower density development, whereas Norfolk is the most densely populated city at over 4,500 people per square mile.

**Table 3.1 HRT Service Area Cities Population and Population Density**

	2000 Population	2010 Population	Change	% Change	Square Miles	Persons Per Square Mile, 2010
<b>Virginia Beach</b>	425,257	437,994	12,737	3.0	248	1,766
<b>Norfolk</b>	234,403	242,803	8,400	3.6	53	4,581
<b>Chesapeake</b>	199,184	222,209	23,025	11.6	340	654
<b>Newport News</b>	180,150	180,719	569	0.3	68	2,658
<b>Hampton</b>	146,437	137,436	(9,001)	(6.1)	51	2,695
<b>Portsmouth</b>	100,565	95,535	(5,030)	(5.0)	33	2,895
<b>Total</b>	1,285,996	1,316,696	30,700	2.4	793	1,660

Source: 2010 Census

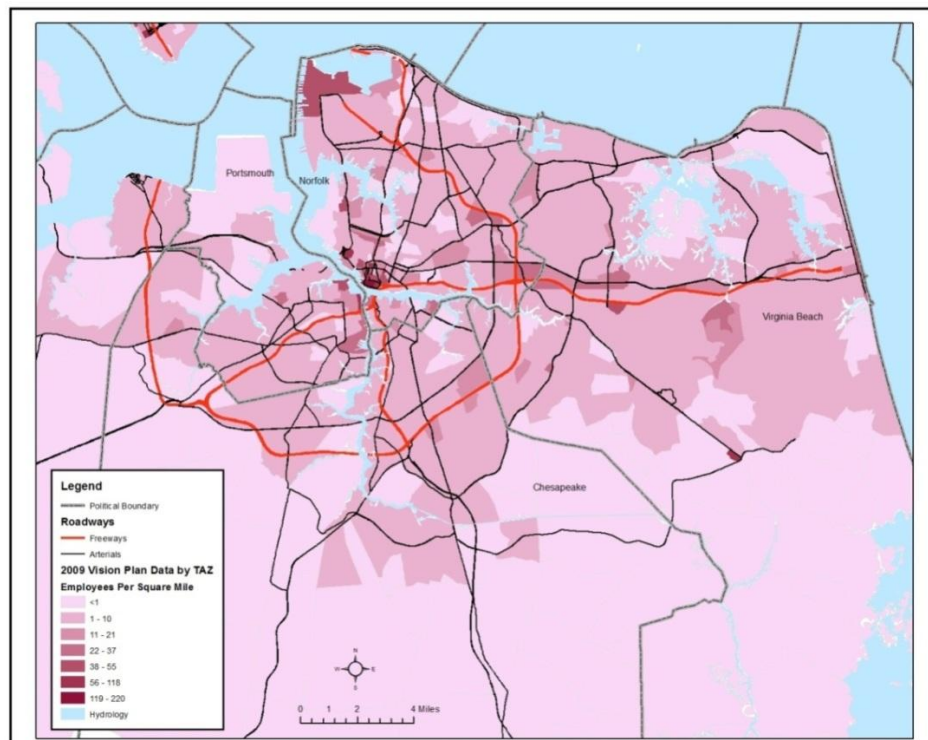
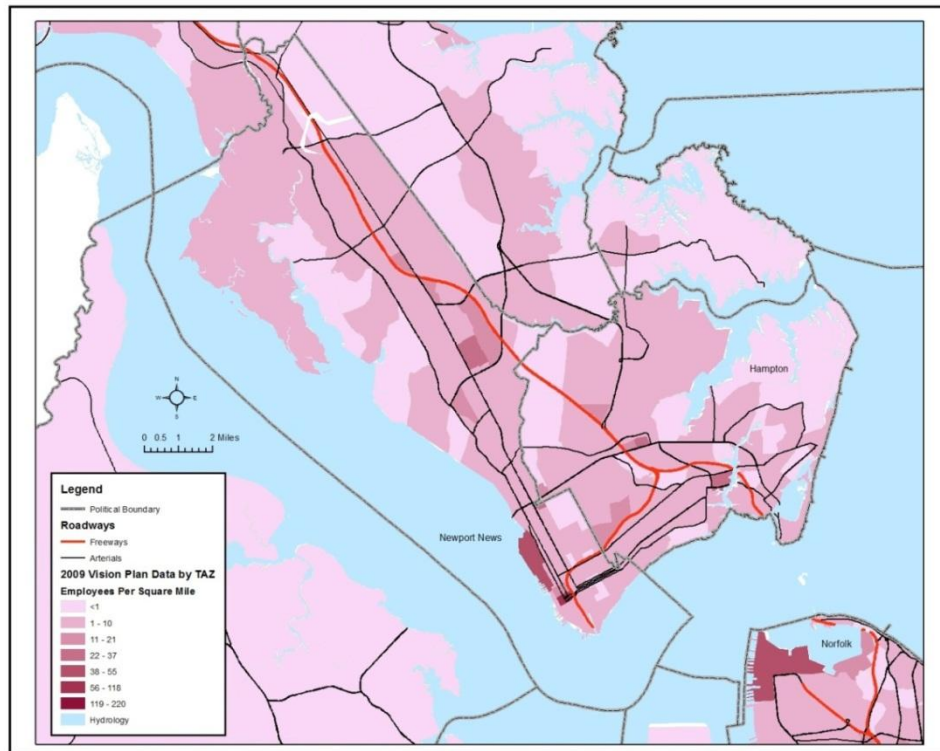
Figure 3.1 depicts the density of employees per square mile. The information is presented by traffic analysis zone (TAZ) based on 2009 employment data from the Hampton Roads Transportation Planning Organization's *Vision Plan Document, April 2009*. The top map illustrates that the north side and the northern part of the south side service area have mostly moderate employment density with several pockets of higher density employment in the more urbanized areas and along the freeways and primary arterials. The outlying areas have the lowest employment density in addition to several more central TAZs that consist almost entirely of residential, agricultural, and/or open space.

In the southern part of the service area, similar to the northern region, the bottom map illustrates that the region has mostly moderate employment density. However, high density employment TAZs are more prevalent, with the largest concentrations in the downtown Norfolk area and the area's largest employer, Naval Station Norfolk. The majority of the employment is concentrated within the beltway and along the freeways and primary arterials. The outlying areas have the lowest employment density in addition to several more central TAZs that consist almost entirely of residential and/or undeveloped agricultural land or park space.

HRT service closely mirrors the current employment density, and in fact 95% of all jobs in the HRT service area are within 1/4 mile of existing HRT service (see Table 3.10). There are no locations with high employment densities that are not served by HRT, however locations that in need of greater service are identified later in this Chapter.



**Figure 3.1 Employment Density**



Source: Hampton Roads Transportation Planning Organization, 2009 Data

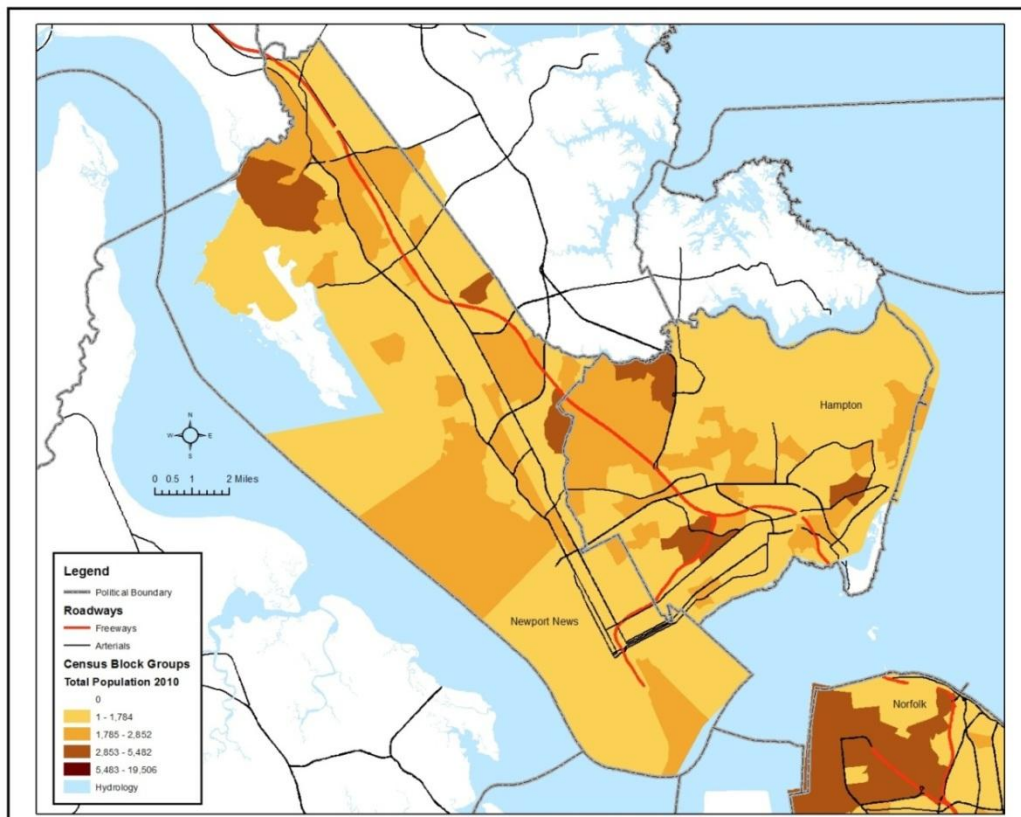


Figure 3.2 shows the 2010 residential population by census block group. The first map reflects the suburban nature of the residential areas of Newport News and Hampton, with only a few census block groups with higher population concentrations. In addition, the land adjacent to the freeways and primary arterials typically has lower population; less development around primary arterials is indicative of the sprawling nature of the land development patterns.

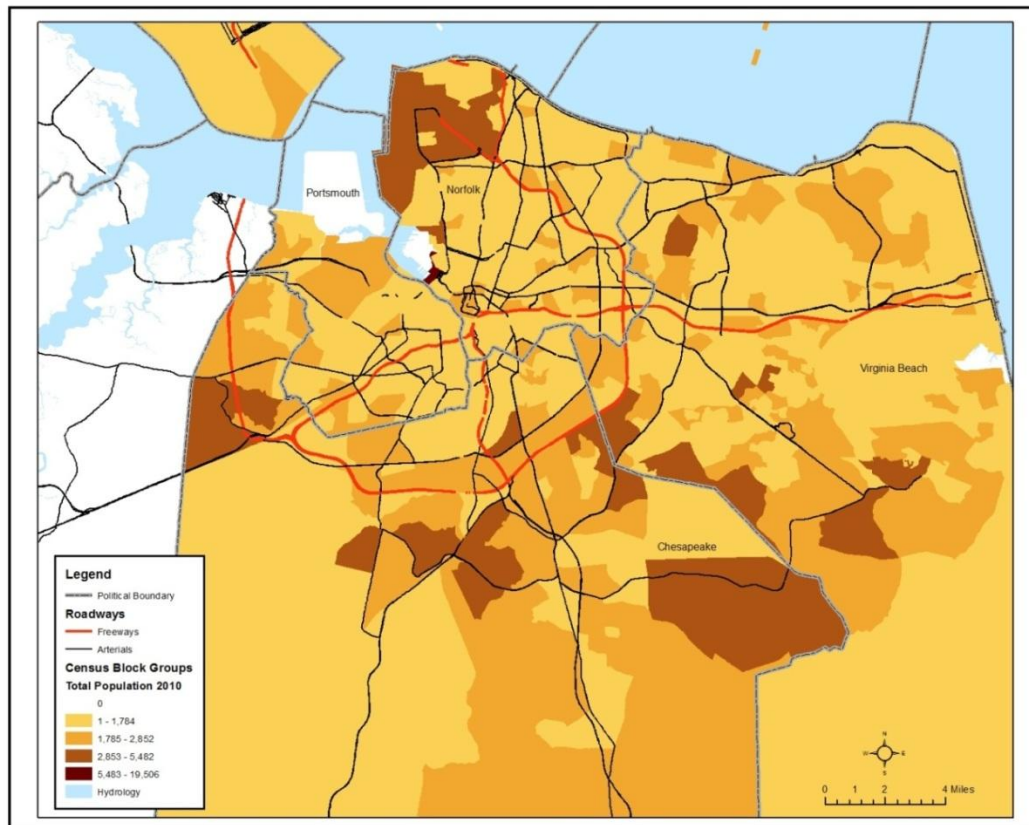
The second map shows the 2010 population by census block group in the southern Hampton Roads region including the cities of Norfolk, Portsmouth, Chesapeake, and Virginia Beach. The map clearly illustrates the urbanized core in Norfolk and Naval Station Norfolk; other than that area, nearly all of the higher population concentrations are shown outside the Interstate 64/664 beltway, illustrating the multi-nodal nature of the region. The areas just outside of the downtown areas in Norfolk, Newport News, and Hampton and the urbanizing areas in Virginia Beach and Chesapeake have uniformly low concentrations of population. The majority of the higher population concentrations are shown in the outlying areas of Chesapeake and Virginia Beach.

HRT service does a good job of reaching the residential population in the large service area; 67% of residents are within 1/4 mile of HRT service.

**Figure 3.2 Residential Population**



**Figure 3.2 Residential Population (continued)**



Source: US Census 2010

In addition to population and employment densities, Figure 3.3 depicts the current land use in the HRT service area overlaid with the HRT route network. The current route structure very clearly serves industrial, commercial, mixed use, and institutional land uses. While the land use maps do not depict a difference between high density and low density residential, a cross-check on the population density in Figure 3.2 reveals that the routes do focus on those residential areas of greatest density. The TDP recommendations thus seek to increase access to the areas already served and provided more direct access between key origin-destination pairs.

Figure 3.3 Existing Land Use

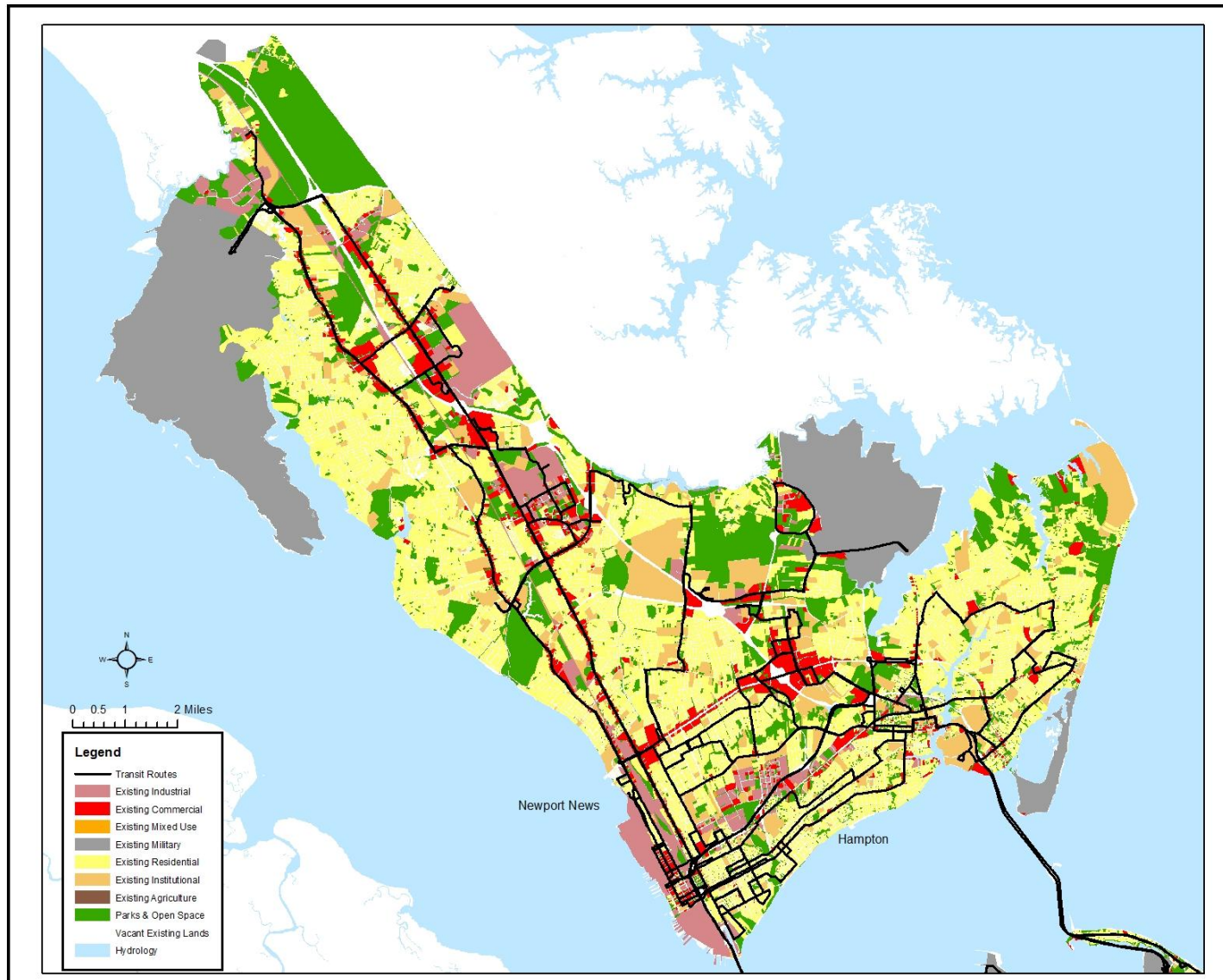
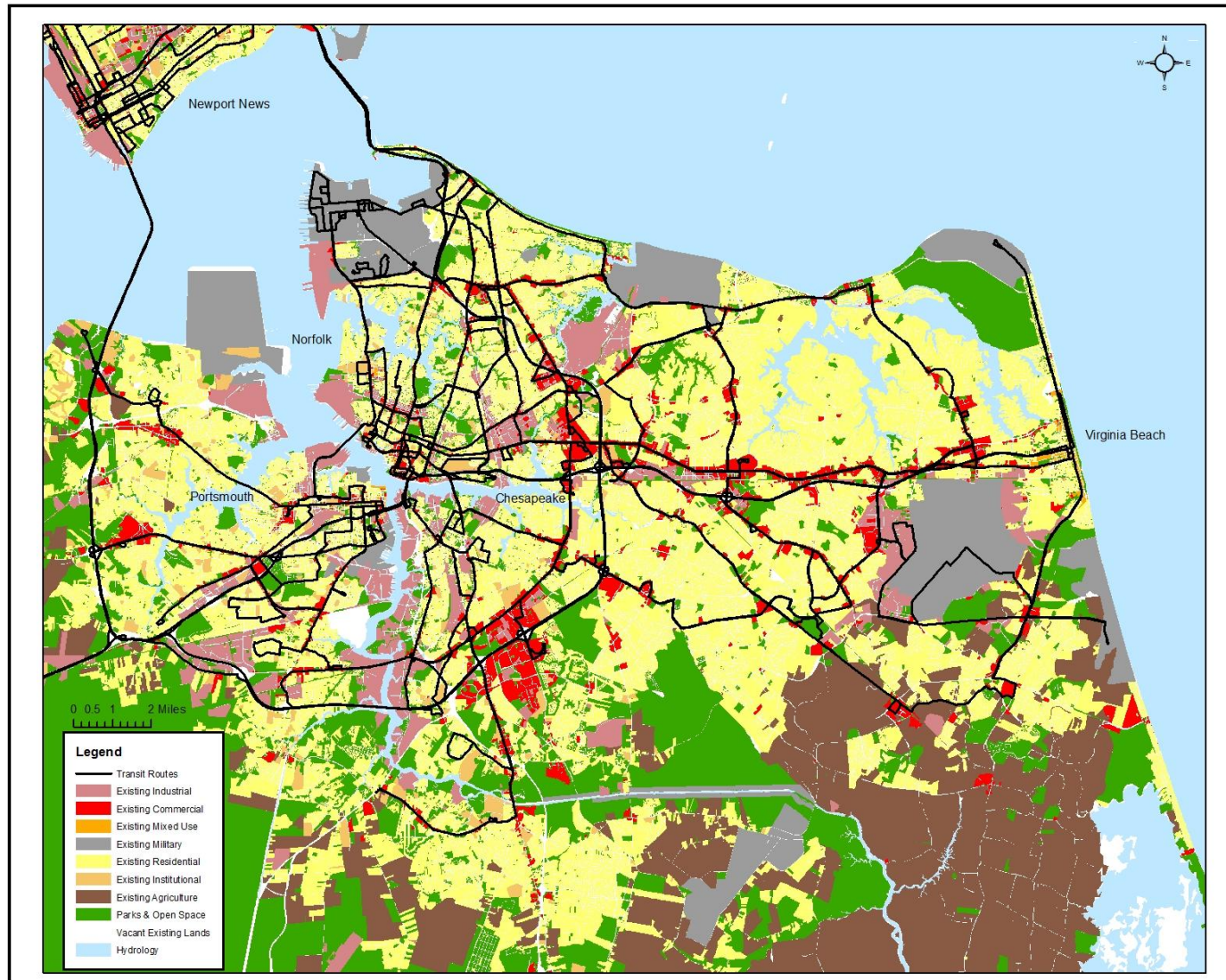




Figure 3.3 Existing Land Use (continued)



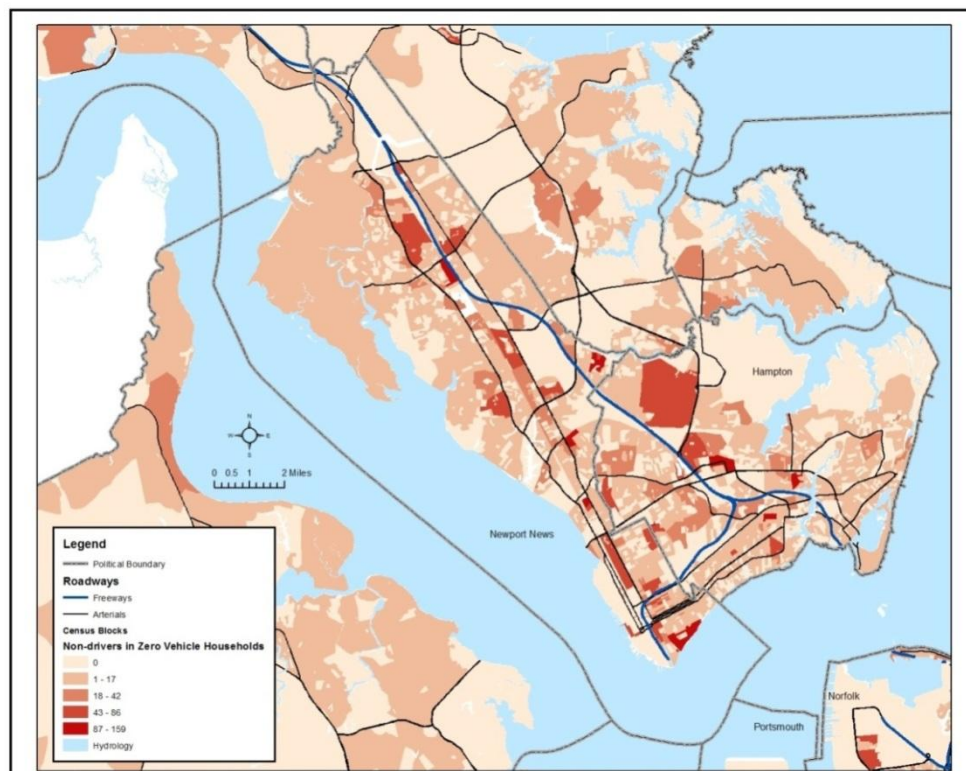
Source: Hampton Roads Transportation Planning Organization

Figure 3.4 shows the number of non-drivers in zero-vehicle households, which is a measure of the number of people over the age of 18 who do not have access to a vehicle, mainly due to financial reasons, although physical impairment could also be a reason for someone reporting as a non-driver. The information is presented by census block based on analysis of 2000 census data from the Hampton Roads Transportation Planning Organization's *Non-Driver Residential Locations at the Census Block Level by Vehicle Availability, November 2009*. With regard to the use of this data, the report states the following:

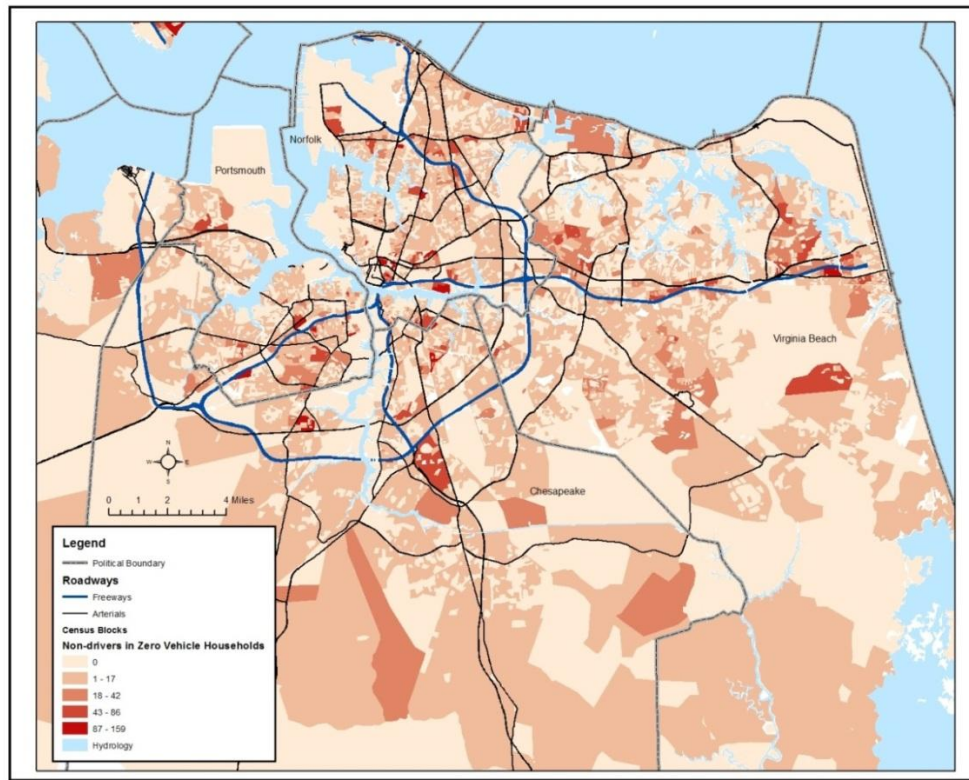
*"Local government and transit agencies can use this data when deciding where to promote the development of activity locations and where to invest in transit, two factors which improve non-driver mobility as measured by previous TPO studies."*

The data for Hampton and Newport News show that the number of non-drivers in zero-vehicle households in each census block ranges from 0 to 159, although the map illustrates that for most of the region, the number of non-drivers in zero-vehicle households is fairly low, ranging from 0 - 17 people in each census block. However, the map also shows that there are many census blocks that have high concentrations of non-drivers in households without access to a vehicle, with a significant number in the 43-159 person range.

**Figure 3.4 Persons (Non-Drivers) Living in Households with Zero-Vehicles**



**Figure 3.4 Persons (Non-Drivers) Living in Households with Zero-Vehicles (continued)**



Source: 2000 Census as analyzed by Hampton Roads TPO

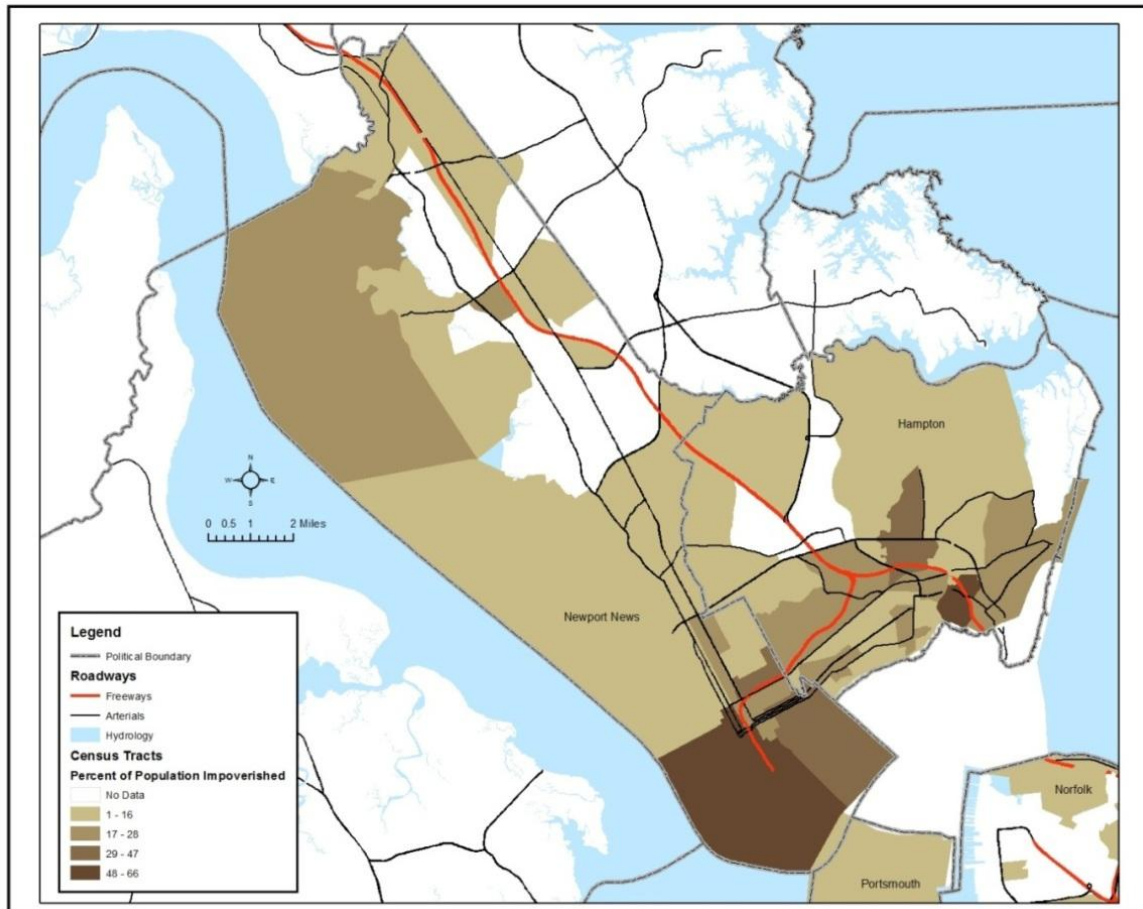
Figure 3.5 depicts the percentage of the population living in low-income households in 2009. The information is presented by census tract based on American Community Survey (ACS) 2005-2009 five-year estimates. The data on poverty status of households were derived from answers to the income questions; the definition of low-income is based on the federal poverty definition in the 2000 Census.

The maps show the higher numbers of low-income persons in downtown Newport News, Hampton, Portsmouth, and Norfolk and their immediately surrounding areas. The outlying areas in the region either have no data<sup>1</sup> or experience poverty at lower percentages. The maps also reveal that the higher percentages of the population who are low-income are typically in the areas with lower overall population (see Figure 3.2) and higher concentrations of employment (see Figure 3.1). These include commercial-oriented areas that may be less desirable as a residential location.

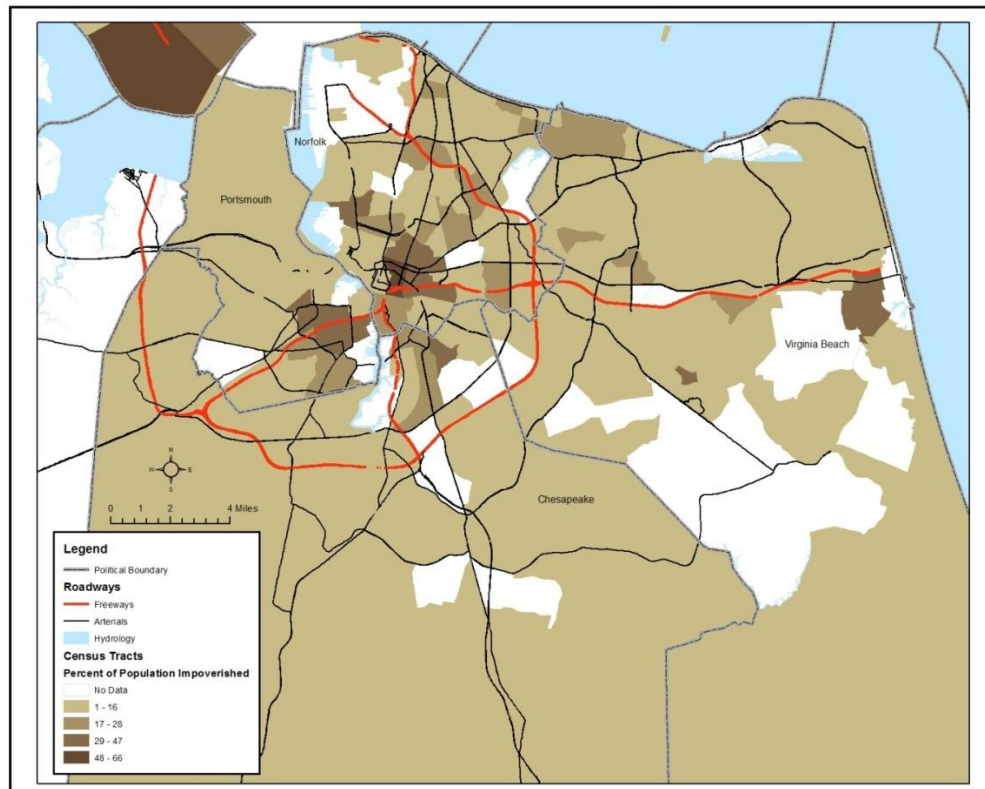
<sup>1</sup> Poverty data was not available for 22.5% of the service area population.



**Figure 3.5 Percent Low-Income Population by Census Tract**



**Figure 3.5 Percent Low-Income Population by Census Tract (continued)**



Source: American Community Survey (ACS) 2005-2009 5-year estimates.

### 3.3 Hampton Roads Regional Transit Vision Plan

The Hampton Roads Regional Transit Vision Plan completed in February 2011 in conjunction with VDRPT, HRT, and Williamsburg Area Transit Authority presents a blueprint to enhance the regional transit network beginning in the year 2025; the vision plan is not cost constrained in any way, but it provides a general blueprint for transit system growth over the next 25 years and beyond. The plan considers several rapid transit mode options, as shown in Figure 3.6 and as summarized in Tables 3.2 and 3.3 on the following pages, to create corridors that connect employment and population activity centers throughout the region. The Vision Plan recommends a phasing strategy for the developing the network in concert with a coordinated land use plan. Improvements recommended in the short-term (2025) include high-speed ferry services for commuters crossing between the Peninsula and the Southside, connecting major employment centers located in downtown Newport News, the Naval Station North, and Harbor Park. Upgraded higher-speed ferry service is recommended between downtown Portsmouth and downtown Norfolk with a future connection to the proposed multi-modal hub at Harbor Park. Lastly in the short-term, the plan recommends an extension of The Tide LRT service to the Norfolk Naval Station as well as an extension to Virginia Beach.

The long-term recommendations (by 2035) are organized into Southside projects and Peninsula projects. The Southside long-term recommendations include streetcar service from Portsmouth downtown/midtown loop and LRT between Harbor Park and Greenbrier. This study recommends that

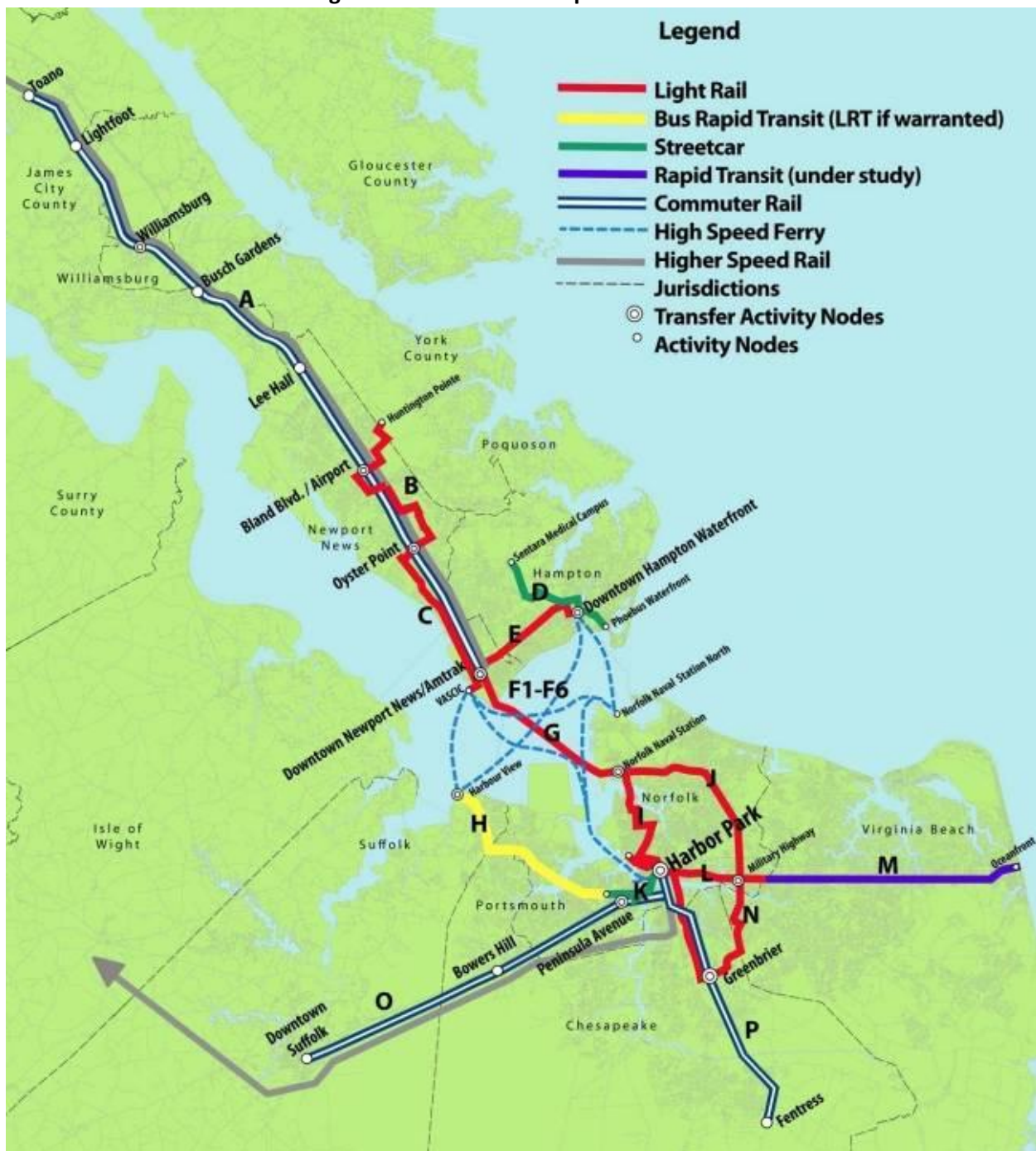


downtown Newport News become the transit network's regional multi-modal hub for the Peninsula (corresponding with Harbor Park as the multi-modal hub on the Southside). The Peninsula long-term recommendations include commuter rail service that builds on existing express bus service between Downtown Newport News and Williamsburg. LRT service is recommended between Christopher Newport University and Huntington Pointe to connect new mixed-use developments that have been approved along this corridor. Additional LRT service is recommended between downtown Newport News and Christopher Newport University, providing a link between two major employment centers (Oyster Point and downtown Newport News) and connectivity to the proposed Peninsula multi-modal transit hub in downtown Newport News. These projects are considered strong candidates but do require further evaluation by the appropriate localities to support final planning decisions and future implementation.

The extended term recommendations (beyond 2035) on the Southside include BRT service from Harbor Park to Harbour View, via Downtown Portsmouth, an extension of The TIDE between Military Highway Station and Norfolk Naval Station, LRT that extends the recommended corridor between Harbor Park and Greenbrier to The TIDE's Military Highway Station, commuter rail service from Harbor Park to Downtown Suffolk, and commuter rail service from Harbor Park to Fentress. Extended-term corridor recommendations on the Peninsula side include commuter rail from Williamsburg to Lightfoot and Toano, streetcar service from Phoebus Waterfront to Coliseum Central, and LRT from Downtown Newport News to Downtown Hampton. These concepts for beyond 2035 build upon projects proposed for earlier periods and will require targeted policies for transit-supportive land uses and densities to emerge to support feasibility.

The plan anticipates that as the regional transit service expands and ridership increases, high-speed ferry service will be feasible between downtown Hampton and Harbor Park and downtown Newport News to Harbor Park. Additional high-speed ferry service is recommended between Harbour View to downtown Newport News and downtown Hampton. Lastly, the plan recommends a LRT tunnel, between Downtown Newport News and Norfolk Naval Station, to provide a connection between the Peninsula and the Southside to complete the regional transit network. The Vision Plan also outlines a network of express bus and enhanced bus corridors phased to correspond with implementation of the new fixed guideway transit corridors. These corridors provide transit service in areas with densities not yet able to support fixed guideway transit or commuter rail. The lists provided on the next pages provide more comprehensive compilation of the Vision Plan proposed transit elements.

Figure 3.6 Vision Plan Proposed Corridors



Source: Hampton Roads Regional Transit Vision Plan, February 2011

**Table 3.2 Vision Plan Recommendations for Fixed Guideway Transit, Ferry, and Commuter Rail**

Map Legend	Corridor Name	Mode	Timeframe
F1	Downtown Newport News to Naval Station North and Harbor Park	High-Speed Ferry	Short-term
F2	Downtown Hampton to Naval Station North and Harbor Park	High-Speed Ferry	Short-term
F3	Downtown Portsmouth to Downtown Norfolk	High-Speed Ferry	Short-term
I	Downtown Norfolk to Norfolk Naval Station	Light Rail	Short-term
L	The TIDE (Phase I Complete)	Light Rail	Short-term
M	TIDE Extension to Virginia Beach	Rapid Transit mode tbd	Short-term
A	Downtown Newport News to Williamsburg	Commuter Rail	Long-term
B	Christopher Newport University to Huntington Pointe	Light Rail	Long-term
C	Downtown Newport News to Christopher Newport University	Light Rail	Long-term
K	Harbor Park to Portsmouth Downtown/Midtown Loop (future extension to Harbor Park)	Streetcar	Long-term
N	Harbor Park to Greenbrier	Light Rail	Long-term
A	Extension from Williamsburg to Lightfoot and Toano	Commuter Rail	Extended-term
D	Phoebus Waterfront to Coliseum Central	Streetcar	Extended-term
E	Downtown Newport News to Downtown Hampton	Light Rail	Extended-term
F4	Downtown Hampton to Harbor Park (direct)	High-Speed Ferry	Extended-term
F5	Downtown Newport News to Harbor Park (direct)	High-Speed Ferry	Extended-term
F6	Harbour View to Downtown Newport News and Downtown Hampton	High-Speed Ferry	Extended-term
G	Downtown Newport News to Norfolk Naval Station	LRT-Only Tunnel	Extended-term
H	Harbor Park to Harbour View (via Downtown Portsmouth)	Bus Rapid Transit (possible future LRT)	Extended-term
J	Extension of TIDE from Military Highway Station to Naval Station	Light Rail	Extended-term
K	Extension of Portsmouth Streetcar to Harbor Park	Streetcar	Extended-term
N	Extension from Greenbrier to the TIDE's Military Highway Station	Light Rail	Extended-term
O	Harbor Park to Downtown Suffolk	Commuter Rail	Extended-term
P	Harbor Park to Fentress (possible future extension to North Carolina)	Commuter Rail	Extended-term

Express and enhanced bus service and circulator service (Table 3.3) is recommended to provide connections to Harbor Park, the envisioned multi-modal hub on the southside of the service area, corresponding to a multi-modal hub on the Peninsula in downtown Newport News. In the short-term, express bus service is recommended between Harbor Park and Great Bridge and enhanced bus service is recommended from Harbor Park to Harbor View. Long-term recommendations include enhanced bus service from Portsmouth to Victory Crossing to Harbor Park and express bus service from Harbor Park to downtown Suffolk. It is important to remember that in the Vision Plan, short-term refers to the time period between 2010 and 2025. At the time of the TDP writing, plans for the multi-modal hubs were not far enough along to warrant recommendations for focusing service on those two locations.

**Table 3.3 Summary of Vision Plan Express and Enhanced Bus and Circulator Service Recommendations**

Corridor Name	Mode
Harbor Park to Great Bridge	Express Bus
Norfolk Hospital to Portsmouth via Midtown Tunnel	Enhanced Bus
Harbor Park to Harbour View	Enhanced Bus
Downtown Newport News to Williamsburg	Express Bus
Princess Anne Road and Lynnhaven Pkwy	Enhanced Bus
Oceana Transit Station to Oceana Naval Air Station	Enhanced Bus
Downtown Hampton to Oyster Point	Enhanced Bus
I-464/Route 168, Norfolk to Chesapeake (future extension to North Carolina)	Express Bus
Downtown Portsmouth to Northgate Commerce Park	Express Bus
Portsmouth to Victory Crossing to Harbor Park	Enhanced Bus
Harbor Park to Downtown Suffolk	Express Bus
Norfolk, Portsmouth, Chesapeake Square Mall	Enhanced Bus
Downtown Newport News to Hampton/Buckroe Beach	Enhanced Bus
Gloucester County to Oyster Point	Express Bus
Smithfield to Downtown Newport News	Enhanced Bus
Harbour View to Smithfield	Express Bus
Oyster Point to Poquoson	Enhanced Bus
Poquoson to Langley to Coliseum Central	Enhanced Bus
Downtown Suffolk to Bowers Hill to Harbour View	Express Bus
Downtown Norfolk to Deep Creek (future extension to North Carolina)	Express Bus
Norview Avenue to Norfolk International Airport	Circulator Bus
International Drive into Norfolk Naval Station	Circulator Bus
Phoebus Waterfront to Fort Monroe	Circulator Bus

Finally, two fixed-guideway extensions to The Tide light rail are expected to be studied for implementation in the short-term. Those studies are outlined in Table 3.4.

**Table 3.4 The Tide Short Term Extension Proposals**

Proposed Corridor	Available Funding	Corridor Description	Study Details
<b>Virginia Beach</b>	\$6.2 million	An extension of new The TIDE light rail to Virginia Beach has been proposed. As part of the Vision Plan, there are various rapid transit modes (i.e., rail or bus transit modes with a dedicated and fixed guideway that enables them to operate separately from other modes of transportation) as well as an enhanced bus alternative and a No Build alternative that are being evaluated as potential alternatives to serve the corridor.	The available funding will cover the cost of preliminary engineering and partially complete final design.
<b>Downtown Norfolk to the Norfolk Naval Station</b>	\$29.0 million	An extension to the Norfolk Naval Station will provide direct connections to three major employers, in addition to a university campus. This corridor offers the highest population density of all the corridors and has average to high ridership expectations compared with the other corridors.	The corridor study funding will cover the costs for an Alternatives Analysis.

### 3.4 Historical Performance of HRT

Over the past five years, as shown in Table 3.5, the HRT system has seen steady growth in ridership, with the growth rate accelerating in the most recent years and months. Fare revenue has also increased year by year, but not in direct proportion to ridership, as fare offerings have changed over time and passengers have opted for different fare media, depending on what gave them the best value. This variance is demonstrated by the average fare per rider, which was increasing through FY 2009, but then dropped in FY 2010. HRT has not had a fare increase since the merger of Pentran and TRT in 1999. Operating costs have increased, but by varying rates. Additionally, costs have generally increased faster than ridership or revenue, leading to a downward trend for the fare recovery ratio, though it has been flat over the past three years thanks to a decrease in cost inflation. The average cost per rider has gone up every year, though the recent acceleration of ridership growth has slowed the increase substantially.

**Table 3.5 Five-Year Historical Trends in Annual Ridership, Revenue, and Cost**

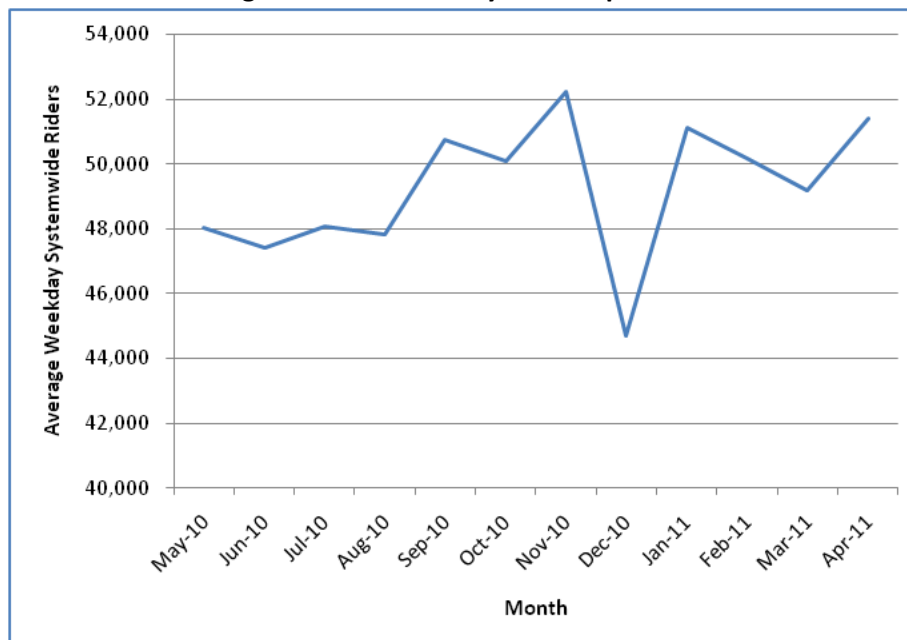
Item	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010
<b>Total System Ridership</b>	14,291,862	14,351,788	14,600,684	14,895,095	15,366,781
<b>Percent Change</b>		0.4%	1.7%	2.0%	3.2%
<b>Annual Fare Revenue</b>	\$12,333,458	\$12,614,511	\$12,951,783	\$14,020,147	\$14,032,414
<b>Percent Change</b>		2.3%	2.7%	8.2%	0.1%
<b>Average Fare per Rider</b>	\$0.86	\$0.88	\$0.89	\$0.94	\$0.91
<b>Percent Change</b>		2.3%	1.1%	5.6%	(3.2%)
<b>Fare Recovery Ratio</b>	20.2%	20.1%	18.3%	18.5%	18.4%
<b>Percent Change</b>		(0.5%)	(9.0%)	1.1%	(0.5%)
<b>Total Operating Cost</b>	\$61,095,810	\$62,646,029	\$70,670,178	\$75,739,765	\$76,413,517
<b>Percent Change</b>		2.5%	12.8%	7.2%	0.9%
<b>Average Cost per Rider</b>	\$4.04	\$4.16	\$4.61	\$4.88	\$4.97
<b>Percent Change</b>		3.0%	10.8%	5.9%	1.8%

### ***Recent Changes***

Figure 3.6 displays average weekday systemwide ridership over the most recent 12-month period available at the time of this writing. These totals include all regular bus routes, the MAX routes, and the Peninsula commuter service, but not the VB Wave routes or the ferry.

Other than a precipitous drop in December 2010, which was related to the weather and reduced travel due to the holidays and vacations, the recent trend in ridership has been positive, with an overall gain of 7% from May 2010 to April 2011.

**Figure 3.6 Recent Daily Ridership Trends**



### 3.5 Peer Review

While Hampton Roads Transit had an established list of peer agencies that had been used in the past, for the purposes of this TDP the agency determined that the existing list of peers should be updated. HRT's existing peer agency list was compiled by identifying agencies in the National Transit Database (NTD) with similar Urbanized Area (UZA) populations and vehicles operated at maximum service (VOMS) volumes (peak period pullouts). While VOMS is a useful measure for general comparative purposes, VOMS volume does not alone provide a sense of the size or character of the environment in which an agency is operating. Even the UZA population, without a consideration of UZA size and general demographics and land use patterns, does not truly indicate which agencies HRT should choose to compare itself to. The Hampton Roads region has very decentralized employment and residential land use patterns, which is more challenging to effectively provide service to than regions with central employment districts or multi-centric mixed-use land use patterns.

A list of potential new peer agencies, suggested on the basis of their general size (VOMS, revenue hours of service, etc.), and the size and land use characteristics of their service areas, was added to HRT's existing peer agency list. In total, this combined list included 16 potential peer agencies. Using 2009 NTD data, these 16 agencies were compared on the basis of their similarity to HRT not only on their VOMS volume and UZA population, but also several other factors that provide a proxy for their operating environments and service range, including their urbanized area population per square mile, service area population per square mile, and passenger trips per capita.

This initial list of 16 potential peer agencies was ranked by service area population per square mile, and then by passenger trips per capita. A clear break in the data became evident after this sort, and five agencies on the list, three with a population density higher than HRT, and two with a population density just lower than HRT, were selected (see Table 3.6). The final list of selected peers includes the following agencies:

- Sacramento Regional Transit District (Regional Transit), Sacramento, CA,
- Pinellas Suncoast Transit Authority (PSTA), Pinellas County, FL
- Jacksonville Transportation Authority (JTA), Jacksonville, FL
- Central Ohio Transit Authority (COTA), Columbus, OH
- Community Transit, Snohomish County (Washington) Public Transportation Benefit Area Corp.

**Table 3.6 Peer System Characteristics, 2009**

	Urbanized Area Square Miles	Urbanized Area Population	Service Area Square Miles	Service Area Population	Pop. per Square Mile	Annual Unlinked Passenger Trips	Annual Unlinked Trips per Capita
Regional Transit*	369	1,393,498	277	1,097,932	3,964	17,735,397	16
PSTA	802	2,062,339	240	883,631	3,682	11,953,082	14
JTA *	411	882,295	242	827,453	3,419	10,253,890	12
HRT	527	1,394,439	369	1,210,588	3,281	15,194,997	13
COTA*	398	1,133,193	325	1,057,915	3,255	17,208,787	16
Community Transit	954	2,712,205	279	730,405	2,618	10,292,248	14

*Table Source: National Transit Database, Annual Transit Profiles*

\*Part of HRT's original peer comparison



### ***Peer Systems Overview***

#### Sacramento Regional Transit District (Regional Transit), Sacramento, CA

The Sacramento Regional Transit District (Regional Transit) serves the greater Sacramento, California metropolitan area. The agency operates 64 bus routes with 256 buses and 16 shuttle vans and 37.5 miles of light rail using 76 light rail vehicles. The system has 48 light rail stops and stations, 3,300 bus stops, and 35 bus-to-light rail transfer points. The span of service for Regional Transit's buses is 5:00 a.m. to 9:00 p.m. daily, with routes operating at headways in the range of 15 to 75 minutes; most routes have headways of 30 minutes or greater. Light rail has a span of service from 4:00 a.m. to 7:00 p.m.-9:00 p.m., depending on the line, and a headway of 15 minutes during the day and 30 minutes in the evening and on weekends. Regional Transit's light rail vehicles run both in mixed traffic and in an exclusive, at-grade right-of-way. Regional Transit also operates 18 park and ride lots. The agency has 1,138 employees. Nearly 60 percent of Regional Transit's funding comes from state and local sales taxes.<sup>2</sup> The regular local bus fare is \$2.50.<sup>3</sup>

The largest segment of land use in the City of Sacramento is residential (27 percent) followed by vacant (13 percent) and agricultural lands (8 percent); vacant and agricultural lands are generally considered available for growth. Residential and commercial land uses are distributed throughout the city. Commercial land uses are located along interstate highways or major arterials, as well as in the traditional city center, while residential land use is pervasive.<sup>4</sup>

#### Pinellas Suncoast Transit Authority, Pinellas County, FL

The Pinellas Suncoast Transit Authority (PSTA) operates 38 bus routes, including 2 express bus routes, with 191 vehicles serving 5,368 bus stops, 712 of which have shelters. Most of PSTA's routes operate with headways of 30 minutes or greater. More than half of the agency's funding (54 percent) comes from local property taxes. The agency has 562 employees.<sup>5</sup> The regular PSTA local bus fare is \$2.00.<sup>6</sup>

Pinellas County is located on the western coast of Florida, and is part of the greater metropolitan Tampa Bay region. The City of Clearwater is the county seat, while St. Petersburg, Florida is the largest city located within the county. While Pinellas County is the most densely populated county in the state of Florida, its land use remains predominantly suburban.<sup>7</sup>

#### Jacksonville Transportation Authority, Jacksonville, FL

The Jacksonville Transportation Authority (JTA) is an independent state agency serving Duval County, Florida. JTA is an agency with multi-modal responsibilities; it designs and constructs bridges and highways and provides a myriad of public transit services, including express and local bus service, community shuttles that provide neighborhood-level circulation, the Skyway monorail, four downtown and beachfront specially-branded trolley bus circulators, a sports stadium shuttle, a paratransit service and an additional demand response public transportation service. JTA currently runs 30 local bus

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<sup>2</sup> Sacramento Regional Transit District Fact Sheet, <http://www.sacrt.com/rtfactsheets.stm>

<sup>3</sup> Regional Transit Passes, Fares and Tickets, <http://www.sacrt.com/faresandpasses.stm>

<sup>4</sup> City of Sacramento General Plan, Technical Background Report, Chapter 2: Community Development, <http://www.sacgp.org/workproducts.html>

<sup>5</sup> PSTA: History, <http://psta.net/history.html>

<sup>6</sup> PSTA: Bus Fares, <http://psta.net/busfares.html>

<sup>7</sup> Pinellas County Comprehensive Plan, <http://www.pinellascounty.org/plan/compendium.htm>



routes, five express bus routes, one on-demand commuter shuttle, and 10 community shuttles, which are served with cutaway vans.<sup>8</sup> Most routes operate with headways of 30 minute or longer. The system has 4,200 bus stops, only 320 of which have shelters. JTA employs approximately 320 bus operators and 100 maintenance workers. The agency is funded through a combination of local toll and sales taxes, in addition to other governmental sources. The regular JTA local bus fare is \$1.00.<sup>9</sup>

Jacksonville, Florida is the largest city in the continental U.S. in terms of land area, and that presents the agency with service challenges. The City of Jacksonville has a strong center-city business district, surrounded by a beltway and auto-oriented, low-density suburban areas with single-family homes. Despite the lower density, these areas have a number of well-defined neighborhoods. The city also has an active beach area, which attracts both tourists and local residents. Jacksonville's maritime port, one the most active and important east coast ports, generates a significant amount of freight traffic throughout the region.<sup>10</sup>

#### Central Ohio Transit Authority, Columbus, OH

Central Ohio Transit Authority (COTA) is centered in Ohio's capital, Columbus, and provides bus service throughout Franklin County, Ohio and the City of Columbus, as well as parts of the surrounding suburban Delaware, Fairfield, Licking and Union Counties. COTA has 67 bus routes that serve 4,313 bus stops (380 of which have shelters). The agency employs 462 bus drivers and has 300 vehicles. COTA is locally funded with a half percent sales tax.<sup>11</sup> The regular COTA local bus fare is \$1.75.<sup>12</sup> COTA also operates 28 park and ride facilities and a paratransit service.

Commercial development in the Central Ohio region is focused on downtown Columbus, a traditional city center, which is surrounded by a beltway. Outside of the city center, land uses are medium-to-low density suburban and predominantly residential. Many of the surrounding suburban counties also have smaller, traditional smaller downtown centers, with a more limited base of commercial development and employment.<sup>13</sup>

#### Community Transit, Snohomish County (Washington) Public Transportation Benefit Area Corporation

Community Transit operates in Snohomish County, Washington, a northern suburb of Seattle. It has 30 local bus routes, including one local "Swift" BRT route, and 23 commuter bus routes to Seattle. The agency maintains more than 2,100 bus stops and operates 21 park and rides with 6,958 parking spaces. Like all other public transit agencies in Washington State, the primary funding source for Community Transit is a locally approved sales tax. In addition to bus service, Community Transit also operates a public vanpool service, which carries 3,000 passengers per weekday, and a paratransit service that serves an average of 600 passengers per day.<sup>14</sup> The regular Community Transit local bus fare is \$1.75.<sup>15</sup>

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<sup>8</sup>Jacksonville Transportation Authority, About, <http://www.jtafla.com/AboutJTA/showPage.aspx?Sel=4>

<sup>9</sup>Jacksonville Transportation Authority, Fares and Passes, <http://www.jtafla.com/RidingJTA/showPage.aspx?Sel=21>

<sup>10</sup>City of Jacksonville, Community Planning Division, <http://www.coj.net/Departments/Planning-and-Development/Community-Planning-Division.aspx>

<sup>11</sup>COTA Facts and Stats, <http://www.cota.com/Publications.aspx>

<sup>12</sup>COTA, General Fares, <http://www.cota.com/General-Fares.aspx>

<sup>13</sup>Mid-Ohio Regional Planning Commission, Land Use Maps, 7 County Standardized land Use Gridded – Current, [http://www.morpc.org/info\\_center/dataport/land\\_use\\_maps.asp](http://www.morpc.org/info_center/dataport/land_use_maps.asp)

<sup>14</sup>Community Transit Agency Profile, <http://www.communitytransit.org/About/AgencyProfile.cfm>

<sup>15</sup>Community Transit, Fares, <http://www.commtrans.org/Fares/FaresAndPasses.cfm>

Snohomish County is predominantly rural and undeveloped in nature, with 68 percent of the County's land being forest, 18 percent rural/low density and 5 percent agricultural. Just 9 percent of the county's land is classified as urban/city.<sup>16</sup>

### ***Peer System Comparison***

As discussed earlier and as shown in Table 3.6, the set of peers was chosen because of their similarity to HRT in terms of overall size, population density, and transit trips per capita. Nonetheless, HRT is at the high end among the peers with respect to the size of its service area and toward the low end of transit trips per capita (only JTA is lower). These observations highlight the challenge that HRT faces in serving an extremely large land area with generally low-density development spread through all parts of the region, which results in a high degree of reliance on automobiles. The spread out nature of the Hampton Roads region means that automobile travel will be far more convenient, if not the only available choice, for the great majority of the travel by the region's residents and employees. That HRT finds that approximately 75% of its riders are transit-dependent is not a surprise, given the land use pattern and the difficulty of offering attractive transit service in a huge area; even with unlimited funds, this is a difficult type of area to serve adequately and effectively by public transit, complicated further by HRT's limited resources that are largely controlled by the cities it serves.

One other fact working against HRT is that the service area consists of six independent cities, instead of one major city surrounded by suburban areas. While Virginia Beach is the largest city among the six, and the City of Norfolk has the Hampton Roads region's largest central business district and is a cultural and historic center, neither city dominates the region as Columbus does for COTA or Sacramento does for Regional Transit. Note that these two agencies, not coincidentally, have the highest number of trips per capita, shown in Table 3.6.

Among its peer systems, Hampton Roads Transit operates the most service by a wide margin. As shown in Table 3.7 below, the system has the highest number of vehicles operating in maximum service (VOMS), the highest number of vehicle revenue miles and the highest number of vehicle revenue hours. These figures reflect the very large service area and the significant distances between the constituent cities and suburban areas that make up the HRT region. Even though HRT does not have the highest ridership among the peers (surpassed by COTA and Regional Transit), it does have the highest annual passenger miles, demonstrating the long trips that HRT riders take on a daily basis. Despite not raising its fares since 1999, HRT has the highest farebox recovery among the peers. To a large extent, this reflects a low operating expense per unit of service (shown in Table 3.8), since both Regional Transit and Community Transit collect more fare revenue than HRT. The average age of HRT buses is relatively high compared to its peers; however HRT likely has a greater ratio of larger buses, which have a longer minimum life and longer useful life than smaller ones. While an average age closer to six years indicates that buses reaching the end of their minimum useful lives (12 years)<sup>17</sup> are being balanced out by new buses, maintaining larger vehicles to a retirement age of 14 years, as is HRT's goal, is considered good standard practice.

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<sup>16</sup>Snohomish County, Washington, About the County, [http://www1.co.snohomish.wa.us/County\\_Information/](http://www1.co.snohomish.wa.us/County_Information/)

<sup>17</sup>*Useful Life of Transit Buses and Vans*, prepared by Booz Allen Hamilton, Inc. McLean, VA for the Federal Transit Administration, April 2007

**Table 3.7 Peer System Operating Characteristics, Bus Fleet Only, 2009**

	VOMS	Avg. Age of Fleet	Annual Passenger Miles	Fare Revenues (\$000)	Operating Expenses (\$000)	Farebox Recovery	Annual Vehicle Revenue Miles (000)	Annual Vehicle Revenue Hours
Regional Transit	195	4.4	59,001,226	\$16,481	\$79,523	21%	7,244	652,027
PSTA	172	4.6	61,725,595	\$11,518	\$51,392	22%	8,762	611,629
JTA	162	6.5	54,696,605	\$8,269	\$53,695	15%	8,902	590,626
HRT	290	8.4*	92,658,651	\$15,839	\$65,264	24%	11,765	871,385
COTA	235	6.4	65,605,753	\$13,300	\$73,251	18%	8,524	685,030
Community Transit	241	8.7	90,171,416	\$18,807	\$82,256	23%	8,520	513,487

*Table Source: National Transit Database, Annual Transit Profiles*

\*Average fleet age as of 2009 NTD Submission. Current average age of the entire fleet is 7.5, or 6.75 for the active fleet.

As mentioned above, HRT has low operating expenses compared to the peers, with the lowest operating expense per vehicle revenue mile, per vehicle revenue hour, and per passenger mile, and is tied for the lowest operating expense per unlinked passenger trip. Several factors would account for the low operating expenses, including driver wages that are below those of the peers and a lean administrative staff, especially given the amount of service operated. With respect to productivity, HRT ranks fourth in passenger trips per revenue mile and fifth in terms of passenger trips per revenue hour. Only JTA is lower on both measures, but they operate small capacity cutaway vans on their community routes which reduces their weighted system averages. HRT results reflect the very large amount of service that HRT operates in its sprawling region coupled with low ridership, even considering the transit-dependent riders. Because of the size of the area and the large distances to cover, the lack of direct service resulting from so many possible origin-destination combinations, as well as generally low frequency service, even the great amount of service operated is not sufficient to make HRT's service attractive to choice riders.

**Table 3.8 Peer Systems Cost Effectiveness, Bus Fleet Only, 2009**

	Unlinked Passenger Trips per Vehicle Revenue Mile	Unlinked Passenger Trips per Vehicle Revenue Hour	Operating Expense per Vehicle Revenue Mile	Operating Expense per Vehicle Revenue Hour	Operating Expense per Passenger Mile	Operating Expense per Unlinked Passenger Trip
Regional Transit	2.45	27.20	\$10.98	\$121.96	\$1.35	\$4.48
PSTA	1.36	19.54	\$5.87	\$84.02	\$0.83	\$4.30
JTA	1.15	17.36	\$6.03	\$90.91	\$0.98	\$5.24
HRT	1.29	17.44	\$5.55	\$74.90	\$0.70	\$4.30
COTA	2.02	25.12	\$8.59	\$106.93	\$1.12	\$4.26
Community Transit	1.21	20.04	\$9.65	\$160.19	\$0.91	\$7.99

*Table Source: National Transit Database, Annual Transit Profiles*

### ***Peer Review Summary***

Serving a sprawling metropolitan area divided by a major harbor crossing and without a major central city, HRT operates a large amount of service at a very low per-unit cost, compared to its peer agencies. However, the productivity of that service is relatively poor compared to the peers, mainly because the amount of service that HRT is able to operate with its finite financial resources is not sufficient to develop a sustainable market of choice riders and is not particularly desirable to the transit-dependent customers. Combined with limited resources, the dispersed travel patterns in the HRT region present a major challenge for conventional transit.

## **3.6 On-Board Survey Results**

### ***COA Survey – June 2010***

The most recent systemwide on-board survey that was available at the time the TDP analysis was completed was conducted as part of HRT's Comprehensive Operations Analysis (COA) in June 2010. That report included a summary of the systemwide results and the detailed tabulations on a route-by-route basis. Those results are not duplicated here, but the characteristics of riders drawn from the survey results were used in the service planning process to evaluate the effects on riders of proposed service changes.

In addition to utilizing the results of the COA, this TDP includes an additional analysis of the on-board survey data which had not been done in the COA. In order to provide another perspective on the demographic analysis of the various parts of the Hampton Roads area, the survey results were compiled by city to determine if there were any salient differences among the ridership bases across the region. The routes that had been surveyed in the COA were assigned to one or more of the six cities. Eleven routes serve two cities, and two routes serve three cities.

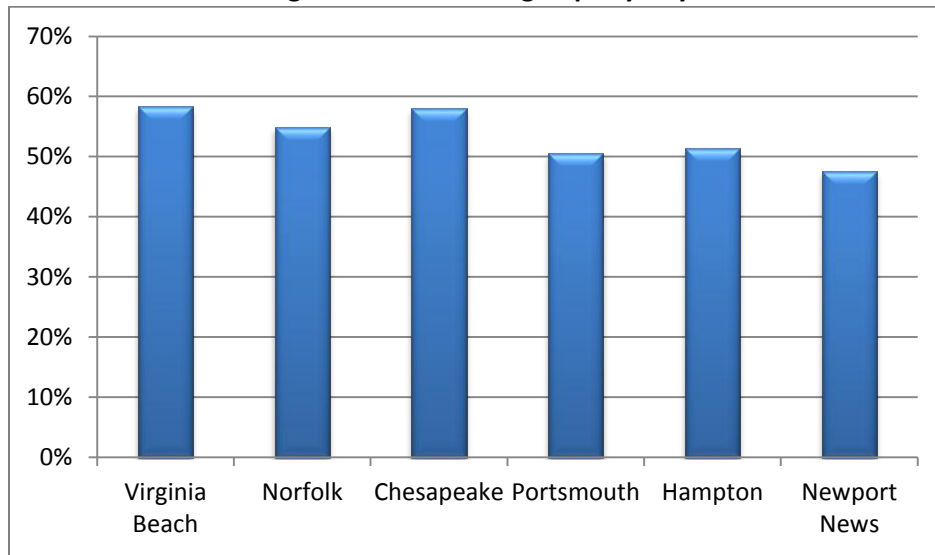
For many of the survey questions there were not significant differences among the cities, partly due to the fact that 13 routes serve at least two cities. Figures 3.7 through 3.10 shown below illustrate the results where there were some differences among the cities.

Commuting to work is the single most important trip purpose in the HRT system, accounting for just over half of all trips systemwide.<sup>18</sup> Work trips are most common on routes serving Virginia Beach and Chesapeake (58%), with Norfolk (55%) close behind. Newport News is the only city with a percentage less than 50%, but this is due to a relatively high percentage (8%) of trips from work to other destinations (such as shopping, school, or medical). In addition, the Peninsula commuter routes were not included in the survey, and those work trips are not reflected in the results.

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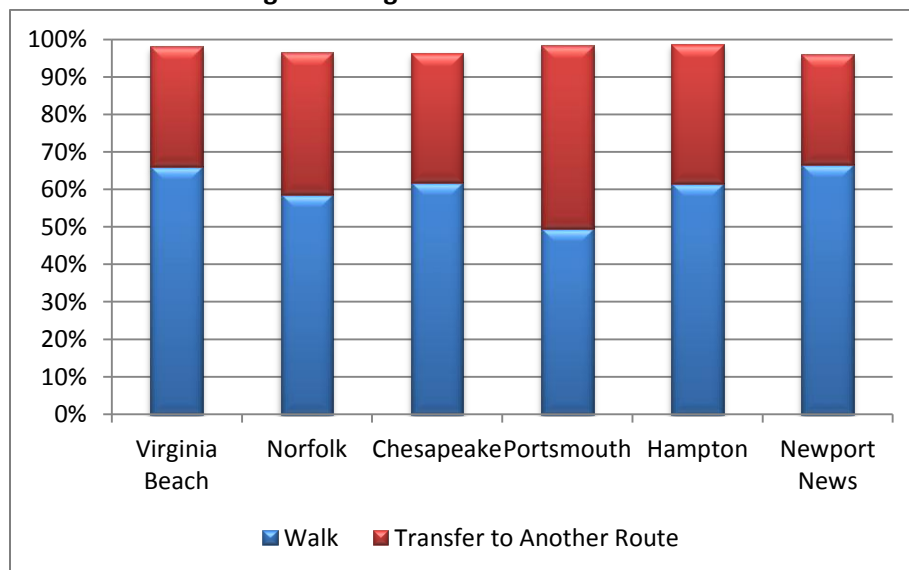
<sup>18</sup> The On-Board Survey excluded certain routes that are primarily used for commuting to work, including the MAX routes. If those routes had been included in the on-board survey it is likely that the percent of riders using HRT to commute to work would be higher.

**Figure 3.7 Commuting Trips by City**



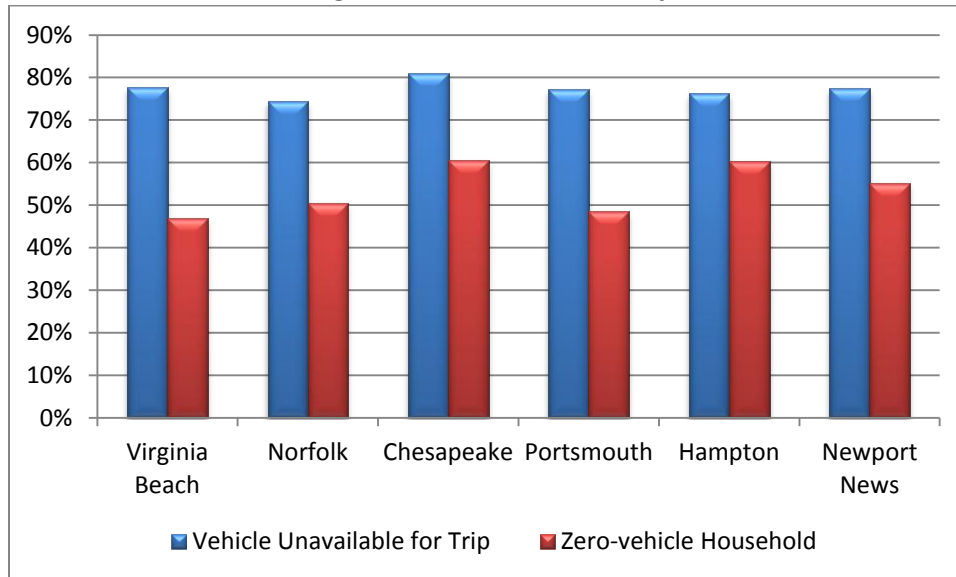
In all HRT cities, the great majority of bus passengers either walk to their destination or transfer to another bus. Bus transfers were somewhat more common in Norfolk and a lot more common in Portsmouth than in the other cities. The Cedar Grove Transit Center in Norfolk has the highest number of transfers in the system, so it is not surprising that Norfolk would see a higher than average transfer rate. Portsmouth has two active transfer centers: one downtown at County Street/Court Street and one near the Victory Crossing Mall at McLean Street/Cavalier Boulevard. Only two Portsmouth routes cross into downtown Norfolk (routes 44 and 45), so Portsmouth passengers wishing to reach Norfolk need to transfer.

**Figure 3.8 Egress Mode from this Bus**



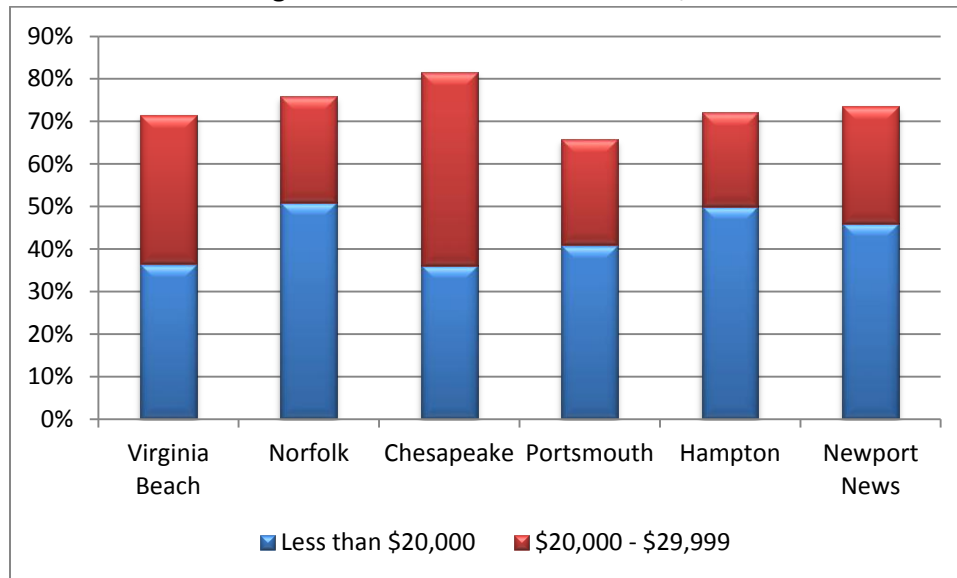
More than 75% of HRT's passengers did not have a vehicle available for their trip. Considering individual cities, riders on Norfolk routes were slightly more likely to have a vehicle available (74% did not), whereas riders on Chesapeake routes were somewhat less likely to have a vehicle (81% did not). The distribution of zero-vehicle households – that is, a household which owns no cars or trucks—is slightly different than the numbers of passengers not having a vehicle available for the trip. Chesapeake and Hampton, at 60% each, were tied as the cities with the highest percentage of riders coming from zero-vehicle households. Virginia Beach and Portsmouth had the lowest percentages, at 47% and 48%, respectively. These two cities had relatively high percentages of one-vehicle households, but in most cases those vehicles were not available to the bus rider who was taking the survey.

**Figure 3.9 Vehicle Availability**



Many respondents chose not to answer the question on household income, but among those who did, the city of Norfolk shows the highest percentage of households in the lowest income category (less than \$20,000 per year). Hampton is close behind, followed by Newport News, but Virginia Beach and Chesapeake routes carry relatively fewer riders in this lowest income category. These two cities have the highest percentages in the next-lowest category (\$20,000 to \$29,999) at 35% and 45%, respectively. Overall, more than 80% of Chesapeake riders have household incomes of less than \$30,000 (the most in the system), while just more than 65% of Portsmouth riders had this income level.

**Figure 3.10 Household Income<\$30,000**



### **2011 On-Board Survey Results**

This survey was developed in order to gain additional insights into riders' travel, demographic, and attitudinal characteristics before HRT's new "The Tide" light rail system that opened August 19, 2011. The results from the survey will be used in order to improve transit service on the HRT system.

The technical memorandum summarizing the results of this survey was not completed within the timeframe of the TDP recommendation development process. Nevertheless, they are reported here for informational purposes and provide valuable insight into trip purpose, frequency of transfer, riding frequency, transit dependency, income, and most needed improvements. A summary for each of these key systemwide survey results is provided in the following section<sup>19</sup>.

#### Trip Purpose

The major systemwide trip purpose was people going from home to work (15,865, 32%) followed by riders going from work to home (7,254, 15%). The disparity between these two responses is partially affected by the morning bias – riders were more likely to fill out their survey for their morning trip than their return trip in the evening. Other major trips include riders going from home to some other trip purpose type (3,582, 7%), home to shopping (1,488, 3%), home to medical (1,468, 3%), and home to social activities (1,480, 3%). From home to college/university was also significant at 1,366 trips (3%).

The major trip purpose for the HRT system as a whole was work trips, accounting for 57% of all trip purposes as reported by riders. As expected, the majority of riders aboard the local routes, MAX routes, and Downtown Norfolk routes also reported that work was the primary reason they were riding the bus. Other notable highlights are:

<sup>19</sup> The information in this section was taken in part or in whole from the 2011 Hampton Roads Transit Rider Survey Results – DRAFT, October 14, 2011

- 8% of the MAX riders use the service for medical purposes;
- 21% of the Ferry riders use the service for recreation and 15% use it for shopping;
- 13% of the downtown riders use the routes for college/university travel; and
- 29% of the WAVE riders use the routes for “hotel/motel” purposes and 34% use them for recreation.

#### Frequency of Transfers

Systemwide 40% of riders reported transferring to their bus. This percentage was consistent on both local routes and MAX routes, with 40-41% of riders reporting having transferred. For transit to the Newport News Shipyard this percentage drops to approximately 15% and for ferry users the transfer percentage was approximately 3%. In summary, the majority of users do not transfer to another bus as part of their trip.

#### Riding Frequency

The survey asked how often do you ride HRT and the responses vary greatly dependent on the type of service. Most route types are predominately used by riders who ride five days per week, reflecting the heavy use of the system for work purposes. Both the Ferry and Wave types attract a substantial percentage of occasional users, while the Local and Downtown types attract six to seven day-per-week riders. The Newport News Shipyard users are clearly weekday commuters, even more so than the MAX users. Systemwide approximately 43% of users ride HRT six to seven days per week, 27% five days per week, 16% three to four days per week, and 8% one to two days per week. Less than 2% reported riding once or twice a month and less than 2% reported riding less than once per month.

#### Transit Dependency

To measure transit dependency, the survey asked riders why they were using the bus for their trip. The results of this question provide insights into the attractiveness of using the bus. The Local routes show a strong orientation toward the traditional “transit captive” market, with 60-75% of the users having no other option. The MAX and NN Shipyard routes show a wider variety of responses choice, captivity, and money. The Downtown and Wave riders have a strong practical bent with substantial portions indicating that they used the bus because it was too far to walk. Systemwide approximately 62% of users reported that they were using the bus because they had no other option. 14% reported that they chose to ride the bus while nearly 10% responded that they were using the bus to reduce their driving costs. Other, environmental concerns, employer contribution, and walking distance were all reported at lower percentages between one and eight percent.

#### Income

Annual household income was also surveyed, with eight choices from under \$10,000 to over \$100,000. On a systemwide basis, about half of the riders have a household income less than \$15,000 and half have more. Systemwide, 32% of respondents reported an annual income of under \$10,000, 17% were in the range between \$10,000 and \$14,999, 17% between \$15,000 and \$24,999, 14% between \$25,000 and \$34,999, 10% between \$35,000 and \$49,999, and 6% between \$50,000 and \$74,999. Less than two percent reported income between \$75,000 and 100,000 and over \$100,000.



### Most Needed Improvements

When participants were asked which bus service improvements are needed, Sunday service, more frequent service, better on-time performance, and more evening service received the highest number of responses. This question was followed by another that asked riders to select a single improvement that was most needed. When asked to select a single improvement, the major choices for the system were better on-time performance (25%), more frequent service (24%), and Sunday service (23%), essentially at three way tie in terms of level of importance for users. More evening service at 12% was the only other response with over 10% of users considering it the most important need. Ferry riders were most interested in more evening service and shelters, while MAX riders were most interested in more frequent service.

## **3.7 Stakeholder Input**

An extensive series of stakeholder interviews was conducted for the 2009 Comprehensive Operational Analysis (COA). Since they were conducted in September and October 2008, within the six-year TDP cycle, these interviews have been included as stakeholder input for the TDP. Using the detailed interview summaries found in Appendix B of the COA, as well as the information presented in section 1.C. *One-On-One Stakeholder Interviews and Results* of the COA, a new analysis of the information acquired from the interview process was compiled. This revised interview analysis clarified and added to the information that was presented in the COA. New interviews specifically for this TDP were conducted with HRT staff members, including long-range planning, service planning and financial staff.

### ***External Stakeholder Interviews***

For the COA, one-on-one interviews were conducted with 27 individuals representing 15 organizations; the list of organizations and the names and titles of those interviewed are presented in Table 3.9. The interviewees in Table 3.9 represent 15 different community institutions and local governments, including universities, the military, all of the local jurisdictions in the HRT service area, and Williamsburg Area Transport; and HRT drivers and supervisors were also interviewed.

Customized interview questionnaires were developed for various types of stakeholders to gain an understanding of how their individual transportation needs were being met or not met by HRT's fixed route services. The goal of these interviews was to identify specific routes and/or aspects of service that could be improved or changed to better meet community needs. The following pages provide an overview of the input provided during the interviews by stakeholder type.

**Table 3.9 External Stakeholder Interview Participants<sup>20</sup>**

Organization	Interview Participants and Titles
Christopher Newport University	Bob Midgette, Jr., Sr. VP of Auxiliary Services Kevin Ososkie, Dir. of Dining Services
City of Chesapeake	Earl Sorey Hon. C.E. Cliff Hayes, Jr., City of Chesapeake
City of Hampton	Jesse Wallace, City Manager
City of Newport News	Al Riatort, City Planner Carl Jackson, Planner Randy Hildebrandt, City Manager
City of Norfolk	Regina Williams, City Manager Jeff Raliski, Sr. City Planner
City of Portsmouth	Kenneth Chandler, City Manager
City of Virginia Beach	James Spore, City Manager
City of Williamsburg	Jack Wallace, City Manager
Ft. Eustis	Frank Dawson
Hampton Roads MPO	Rob Case, Principal Transportation Engineer
Hampton Roads Partnership	Dana Dickens
Naval Station Norfolk	Lt. Soto
TDCHR Commission	Curtis Milteer, Member Grace Routten, Chair Dr. Rick West, Member
Tidewater Community College	Deborah DiCroce, President Dr. Alex Kaistura, Provost, Norfolk Campus Dr. Linda Rice, Provost, Chesapeake Campus Dr. Quintin Bullock, Provost, Virginia Beach Campus Dr. Terry Jones, Provost, Portsmouth Campus
Williamsburg Area Transport	Mark Rickards, Director Mr. Sisco, Operations Manager

#### HRT Drivers and Supervisors

- Need to grow HRT service to match the regional growth in population and employment.
- HRT needs to take advantage of the experienced operators and allow them to work closely with new operators so that they can learn how to appropriately deal with passengers.
- HRT fixed routes that have one-hour headways should have 30-minute headways during peak periods.
- Direct routing is needed to reduce travel time for passengers.
- Specific routes were cited as needing expanded hours and/or frequency.
- Specific routes were cited as being severely impacted by traffic conditions.
- Concern that MAX routes receive the best vehicles and marketing; desire for any new route changes to be marketed well.
- Recommendations for more direct routing to reduce travel time for passengers.

<sup>20</sup> The individuals interviewed are listed by their organizational affiliation at the time that the interviews were conducted; some positions have changed since that time.

- Recommendations for dedicated bus lanes in several locations.
- Concern that new routes are not given enough time to establish themselves before being cut due to low ridership.

#### City Managers and Planning Organizations

- Hampton Roads has historically developed land based on highway access. However, new plans include some areas of higher density that are conducive to public transportation.
- The frequency of service in most areas of Hampton Roads is too limited to attract new riders, and does not serve existing riders well. Passenger travel times are too long and the span of service is too short to meet citizen needs.
- The physical condition of HRT bus stops and shelters, and litter and defacement of these facilities, is a concern. There is a need for more shelters throughout the system.
- Current funding levels for HRT are not adequate. City Managers and Planning Organizations agree that HRT needs a dedicated funding source in order to implement and sustain the necessary service improvements.
- Work needs to be done to help non-users understand the role and importance of HRT and to gain broader support, even before the choice rider market can be targeted.
- TRAFFIX is a great opportunity for managing the road capacity, but they need help in communicating and getting the message out to the people.
- HRT fixed route service is designed for people who have no other option for transportation to work. It is not for choice riders.

#### Military Community

##### *Naval Station Norfolk*

- Want changes to the MAX service and additional park and rides.
- Concern about regular breakdowns of HRT buses.
- Concern about lack of response from HRT customer service.

#### Universities

- Christopher Newport University requested later service hours on the routes serving the college.

#### Williamsburg Area Transport (WAT)

- There are a few hubs in Williamsburg where HRT and WAT meet. At the Williamsburg Transportation Center, Amtrak also provides a connection where passengers may transfer to WAT, HRT, local taxi providers, Greyhound, or a rental car.
- The HRT and WAT connection service is well utilized, but, many people are still unaware of the opportunity to take HRT and connect with WAT for access to Busch Gardens and the water parks.
- WAT would like to work with HRT to improve service into Patrick Henry Mall and the Newport News airport.
- WAT and HRT cannot communicate because they have different radio frequencies. The dispatchers call each other and then contact drivers if a vehicle is going to be late.

### ***Internal Stakeholder Interviews***

A new series of internal stakeholder interviews with HRT staff was conducted specifically for this TDP. These interviews took place during a consultant site visit at HRT that occurred on April 26-28, 2011, and included the following HRT staff:

- David Sullivan, Chief of Staff
- Ray Amoruso, Chief Planning and Development Officer
- Vince Jackson, Director of Service Planning and Scheduling
- Henry Li, Chief Financial Officer
- Brandon Singleton, Budget Officer
- Karen Waterman, Transit Development Officer
- Antoinette White, Manager of Service Development

During these interviews HRT staff provided a detailed overview of the region's major employment and activity centers, travel patterns, HRT operations and maintenance practices, the HRT fare policy, current HRT passenger amenities, and details on funding and budgets, capital plans and programs.

### ***Stakeholder Interviews Summary***

While the stakeholder interviews included representatives of a diverse array of community institutions, there were many repeated themes among those interviewed. The need for HRT to increase its span of service and the frequency of service on many routes to meet rider needs, particularly assisting with access to and from work and to community institutions such as community services boards and municipal centers, was broadly recognized among the interviewees. However, the interviewees also recognized that it is very challenging for HRT to provide the level of service needed when it is reliant on the cities for funding and subject to competing needs on the city budgets. Funding constraints have also affected HRT's maintenance operations, and the agency recognizes that moving forward it will need increased attention to maintaining their bus and rail vehicle fleets and facilities that will require new resources. Many interviewees suggested that HRT pursue the establishment of a dedicated funding source that could help the agency increase service to meet customer demand and better maintain vehicles and facilities.

Interviewees frequently mentioned the perception of HRT in the community as being less than what it could be. HRT riders, experiencing late buses, limited spans of service, degraded and few shelters and few passenger amenities, see many areas in which the agency could improve. Non-riders often do not understand the value that HRT provides to the community, seeing empty buses and buses contributing to traffic rather than reducing congestion and providing critical access to jobs for many citizens. HRT needs to better communicate the value it provides to the Hampton Roads region.

Finally, many valuable recommendations for HRT routes and service changes that would enhance service effectiveness and efficiency provided by the interviewees were considered in the development of this TDP. Many of the service specific recommendations requested that route lengths be shortened or modified to provide more reliability in schedules, that the span and frequency of service be increased on high ridership routes, or that HRT serve emerging employment and residential activity centers.

### **3.8 Focus Groups**

HRT continually seeks input from both riders and non-riders on how the agency can improve its service and outreach activities in the Hampton Roads region. Instead of conducting new, duplicative focus groups, the TDP includes a review of recently completed rider input activities and professionally facilitated non-rider focus groups conducted with participants from all cities served by the agency.

#### ***Rider Focus Group***

HRT conducts focus group style meetings with its Transit Riders Advisory Committee (TRAC) every other month. The TRAC is a subcommittee under the Transportation District Commission of Hampton Roads (TDCHR) Executive Committee; participants are citizens who serve on a voluntary basis. The TRAC was established in July 2009 to provide HRT administration with feedback and recommendations for improving operational or service issues affecting HRT customers and input into HRT's customer outreach activities. The TRAC consists of up to 14 voting members, including at least one resident from each city and one service representative. All riders and interested citizens, not just members of the TRAC, are invited to attend TRAC meetings.

At each TRAC meeting, HRT staff provide an update to the group on current projects and operational issues that will have an impact on HRT riders. For example, at their May 4, 2011 meeting the TRAC discussed the feeder bus service that will be implemented to serve The Tide, focusing in particular on changes to the Rte 20 Virginia Beach Boulevard Bus Line and the Route 310 Shuttle in downtown Norfolk.

#### ***Non-Rider Focus Groups***

The Hampton Roads Transportation Planning Organization (TPO) commissioned Christopher Newport University's Judy Ford Wason Center for Public Policy to conduct a series of six focus groups with Hampton Roads residents to discuss their perceptions of the region's transportation infrastructure.<sup>21</sup> These focus groups were held in March 2010 with residents from throughout the region: three of the focus groups were conducted in the southern part of Hampton Roads, and three were conducted on the Peninsula. Two of the focus groups, one on the Peninsula and one in South Hampton Roads, included only active duty military. The focus groups included participants from all six cities that are served by HRT.

Focus group participants believed that transportation is the most compelling issue for the future of Hampton Roads. Participants expressed a belief that traffic congestion inhibits social cohesion and interaction among citizens of different Hampton Roads jurisdictions. They were also concerned that current development patterns are encroaching upon military installations, an economic mainstay of the regional economy. Focus group participants proposed, independently of any moderation, that the region's major goal for the near future should be to get cars *off* the road to maintain and improve the region's quality of life and economic vitality.

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<sup>21</sup> The Present and Future of Transportation in Hampton Roads, Results of a Series of Focus Groups among Hampton Roads Residents, May 7, 2010, Christopher Newport University's Judy Ford Wason Center for Public Policy.

Without any improvements in transportation infrastructure and development patterns, focus group participants expressed a view that traffic will begin to stymie the region, with one participant saying “the reasons that people once liked to live here will be lost in the traffic.” When asked what they wanted the Hampton Roads region to be like in 20 years, focus group participants responded with their desire for increased economic opportunity coupled with more transportation choices and a higher overall quality of life.

Given the obvious capacity problems with the Hampton Roads regional roadway network, focus group participants strongly advocated for an integrated light rail network that connects all of the cities in the region that is well served by feeder bus. A few study participants also suggested that new and more ferry service is needed, particularly between downtown Hampton and the Norfolk Naval Base and between the Peninsula and South Hampton Roads. The need to increase telecommute options, perhaps by first working with federal employers, was also raised by several focus group participants.

Among the transportation infrastructure improvements on which focus group participants indicated the highest degree of consensus were the following:

- Integrated regional light rail network
- Better bus transit
- Increased water ferry service
- Enhanced Amtrak/high speed rail service
- Repair/upgrade current roads and tunnels
- More taxis

Overall, focus group participants felt that these improvements are needed immediately, and are not luxuries that the region can wait to pursue. Without these basic improvements in the existing transportation infrastructure coupled with new transit infrastructure, focus group participants believe that the Hampton Road’s economy will have difficulty maintaining and improving its economic competitiveness in the future.

### 3.9 Performance Analysis

In preparation for the route-level analysis and service restructuring recommendations, the TDP performance measures from Chapter 2 were applied to HRT's year-round services (excluding the VB Wave). To the extent that the performance measures were identical to those used in the Service Efficiency Study (the on-time performance measure and average total boardings per trip), the findings of that study were carried forward without alteration. New calculations of productivity and fare recovery ratio were performed, as these measures were different from prior studies.

#### ***Service Design***

To quantify how accessible HRT services are to the service area population and jobs, a performance measure is used that reports the percentage of population and employment within ¼ mile of HRT service. Both access to any HRT service and to high frequency HRT service were measured, as shown in Table 3.10. The calculations were conducted by using Traffic Analysis Zone (TAZ) data from 2009 for the number of jobs, and 2010 Census data for the population.

**Table 3.10 Access to HRT Service Within ¼ Mile**

	Any HRT Service	Standard: Any Service	High Frequency Service*	Standard: High Frequency
<b>Percentages of service area <u>population</u> that have access to service and to high frequency service</b>	67%	85%	16%	25%
<b>Percentages of service area <u>employment</u> that have access to service and to high frequency service</b>	95%	85%	43%	50%

\* High frequency is defined as 15-minute service or better (during peak periods and/or all-day).

#### ***Productivity***

For all routes except MAX routes, productivity is defined in terms of the number of boardings per vehicle revenue hour of service. Revenue time is defined as the time the bus is running its route plus scheduled layover time; it does not include the time the bus spends traveling to and from the garage at the beginning and end of a run.

Four time periods were established for the productivity measure: weekday peak (6:00 a.m. to 9:00 a.m. and 3:00 p.m. to 6:00 p.m.), weekday off-peak (all other weekday service), Saturday (all day), and Sunday (all day). For each of these time periods, the productivity of all routes was calculated and then the system average for that time period was calculated as a straight average of the individual route productivities. The performance standard set was 50% of the system average, so that a route that had a productivity of less than half the system average was classified as failing the measure. These routes are indicated with red shading in Tables 3.11 through 3.13. In addition, because relatively few routes failed the 50% standard, a second threshold was set at 66% of the system average to identify "marginal" routes, or those that were close to failing and deserved attention. These routes are indicated with green shading. South side routes are shown in the left-hand sets of columns and Peninsula routes are shown in the right-hand sets of columns in each table.

**Table 3.11 Weekday Productivity (boardings per vehicle revenue hour)**

Route	Peak	Off Peak
1	36.0	38.9
2	24.0	20.2
3	29.4	28.0
4	8.0	8.5
5	22.4	23.6
6	21.9	19.1
8	32.1	28.7
9	19.7	17.8
11	15.0	13.1
12	21.3	18.8
13	34.7	26.1
14	27.0	29.9
15	31.4	34.9
18	14.6	13.5
20	33.1	34.7
23	31.1	27.4
25	17.3	15.8
26	15.2	15.5
27	30.2	22.6
29	19.8	15.5
33	18.5	17.8
36	33.6	24.7
37	2.9	6.0
41	15.3	17.0
44	17.3	16.7
45	33.0	26.5
47	20.5	21.4
50	24.4	23.2
57	17.1	14.0
58	20.1	17.0
101	39.0	33.1
102	16.4	14.9
103	23.3	22.3
104	22.1	17.1
105	31.0	24.9
106	34.5	31.1
107	33.3	28.6



Route	Peak	Off Peak
<b>109</b>	20.4	16.7
<b>110</b>	23.0	22.0
<b>111</b>	18.5	18.4
<b>112</b>	32.5	30.1
<b>113</b>	14.6	10.2
<b>114</b>	25.5	23.4
<b>115</b>	19.6	17.9
<b>116</b>	27.2	20.7
<b>117</b>	63.1	44.6
<b>118</b>	23.6	22.4
<b>119</b>	9.3	8.9
<b>120</b>	24.6	17.7
<b>121</b>	11.0	
<b>System Average</b>	<b>24.0</b>	<b>21.7</b>
<b>66% of Average</b>	<b>16.0</b>	<b>14.4</b>
<b>50% of Average</b>	<b>12.0</b>	<b>10.8</b>

**Table 3.12 Saturday Productivity (boardings per vehicle revenue hour)**

Route	Productivity	Route	Productivity
1	23.3	101	22.8
2	9.5	102	7.9
3	17.6	103	14.7
4	5.7	104	13.5
5	11.1	105	18.3
6	17.2	106	21.4
8	25.6	107	20.1
9	10.7	109	11.2
11	8.4	110	13.7
12	11.0	111	14.3
13	17.0	112	20.3
14	6.4	113	14.8
15	23.2	114	17.7
17	3.0	115	13.0
18	6.5	116	18.3
20	25.7	117	18.0
23	16.7	118	12.7
26	7.8	120	12.6
27	14.3	310	9.6
29	8.9	System Average	12.8
33	7.7	66% of Average	8.5
36	17.1	50% of Average	6.4
37	4.8		
41	8.8		
44	9.1		
45	18.8		
47	15.4		
50	11.3		
57	9.9		
58	10.0		

**Table 3.13 Sunday Productivity (boardings per vehicle revenue hour)**

Route	Productivity	Route	Productivity
1	23.3	101	23.6
2	13.5	102	5.7
3	19.5	103	14.1
4	4.0	104	11.5
8	18.5	105	15.8
11	6.9	106	16.6
13	18.2	107	15.0
15	18.8	109	8.6
17	3.4	110	9.9
20	21.4	111	9.8
23	16.6	112	21.1
37	4.5	113	11.4
45	13.6	114	15.9
		115	12.8
		116	13.7
		117	10.9
		118	10.3
		120	9.6
		<b>System Average</b>	<b>14.0</b>
		<b>66% of Average</b>	<b>9.3</b>
		<b>50% of Average</b>	<b>7.0</b>

The poorest performing routes in all time periods include Route 4, Route 37, Route 119, and Route 121. Weekend productivity is poor on Route 14, Route 17 (the NET), Route 11 and Route 102. Route 18 nearly fails the standard on Saturdays.

The productivity standard for express routes is boardings per trip, due to the fact that there is little passenger turnover on an express trip (and thus the ridership is limited to the capacity), and that a good portion of the revenue time is spent closed door on an expressway. The Service Efficiency Study found numerous MAX routes with poor productivity, and as a result HRT made significant service cuts in May 2011. Given the drastic changes in service and the lack of new ridership information, the productivity for MAX routes is not calculated here.

#### ***Fare Recovery Ratio***

The Fare Recovery Ratio (FRR) is defined as the fare revenue divided by the operating cost for each route. The performance standard for the FRR is 50% of the system average, similar to the productivity standard. The system average is calculated as a straight average of the routes, rather than a weighted average. Table 3.14 shows the budgeted FY2012 FRR for all routes in the system except for those that do not charge a fare.

As with the productivity tables, red shading indicates a failing route that manages less than 50% of the system average FRR (23.0%). The green shaded routes are those that are between 50% and 66% of the system average.

Four regular bus routes fail the standard, and they are the same ones that had the poorest productivity: Route 4, Route 26, Route 119 and Route 121. Route 37 offers weekend-only service and is a very poor performer. Route 17 (the NET) also is projected to fail the farebox recovery standard in FY 2012, however it is important to note that the service did not charge a fare prior to the start of the fiscal year. One of the MAX routes (962) also failed the standard. Service on the 962 has been cut back significantly and the NET has been changed in response to the opening of The Tide.

**Table 3.14 Fare Recovery Ratio**

Route	FRR	Route	FRR	Route	FRR	Route	FRR
<b>1</b>	38.1%	<b>15</b>	32.2%	<b>41</b>	17.5%	<b>111</b>	18.4%
<b>2</b>	19.2%	<b>16</b>	26.2%	<b>43</b>	13.2%	<b>112</b>	34.1%
<b>3</b>	28.2%	<b>17*</b>	10.9%	<b>44</b>	14.2%	<b>113</b>	15.1%
<b>4</b>	8.9%	<b>18</b>	17.3%	<b>45</b>	27.8%	<b>114</b>	24.1%
<b>5</b>	15.8%	<b>20</b>	33.7%	<b>47</b>	24.9%	<b>115</b>	22.7%
<b>6</b>	23.2%	<b>22</b>	48.6%	<b>50</b>	20.8%	<b>116</b>	26.0%
<b>8</b>	30.9%	<b>23</b>	27.8%	<b>57</b>	15.9%	<b>117</b>	42.9%
<b>9</b>	21.0%	<b>25</b>	21.6%	<b>58</b>	18.8%	<b>118</b>	21.3%
<b>11</b>	17.8%	<b>26</b>	10.3%	<b>64</b>	12.6%	<b>119</b>	8.1%
<b>12</b>	21.7%	<b>27</b>	24.4%	<b>101</b>	37.8%	<b>120</b>	18.9%
<b>13</b>	26.5%	<b>29</b>	24.3%	<b>102</b>	14.2%	<b>121</b>	7.6%
<b>14</b>	19.0%	<b>30</b>	29.9%	<b>103</b>	23.2%	<b>4XX</b>	20.1%
		<b>31</b>	21.0%	<b>104</b>	20.9%	<b>919</b>	41.1%
		<b>32</b>	18.8%	<b>105</b>	26.4%	<b>922</b>	48.6%
<b>System Average</b>	23.0%	<b>33</b>	23.5%	<b>106</b>	33.2%	<b>960</b>	16.7%
<b>50% of Average</b>	11.5%	<b>34</b>	32.0%	<b>107</b>	30.5%	<b>961</b>	27.9%
<b>66% of Average</b>	15.3%	<b>36</b>	26.9%	<b>109</b>	17.9%	<b>962</b>	6.5%
		<b>37</b>	10.0%	<b>110</b>	21.2%	<b>967</b>	17.8%

\* Route 17 was a free service prior to FY 2012.

### ***On-Time Performance***

The Service Efficiency Study conducted a review of service reliability for all year-round bus routes and the MAX express routes. The study considered both the reliability at terminal locations (on-time departures and arrivals at the ends of the routes) and reliability at intermediate timepoints where routes join together at timed transfer locations.

The TDP did not attempt to redo any of the analysis of the Service Efficiency Study, since it was done within the past six months. The summary tables regarding these two types of reliability are reproduced in Table 3.15. Moving forward, new on-time performance standards, described in Chapter 2, will be used to continuously monitor the on-time performance at both the system and route level.

**Table 3.15 On-Time Performance Results from the Service Efficiency Study**

<b>Terminal Reliability</b>	<b>Routes</b>
<b>Routes requiring reschedule and additional resources</b>	106/107, 961
<b>Routes requiring reschedule with no additional resources but requiring deletion of deviation</b>	14, 57, 116
<b>Routes requiring reschedule with no additional resources and no new interline</b>	1, 2, 3, 4, 6, 8, 9, 12, 14, 15, 18, 20, 23, 26, 29, 30, 31, 32, 33, 36, 41, 44, 47, 57, 58, 64, 101, 102, 105, 109, 110, 111, 112, 114, 115, 116, 117, 118, 121, 403, 405, 409, 414, 424, 430, 918, 919, 922, 962, 963, 967
<b>Routes reliably timed</b>	5, 11, 13, 25, 27, 45, 50, 103, 120, 300, 310, 406, 412, 415, 427, 432, 960
<b>Routes to be interlined or retimed to reduce resource requirements</b>	3/45, 47
<b>Timed Transfer Reliability</b>	<b>Routes</b>
<b>Routes requiring revising - late running</b>	2 SB, 4, 12 EB, 14, 20 WB, 23 EB, 26 NB, 29 NB, 33, 36 SB, 41, 44 WB, 50 SB, 57, 103, 104, 105 NB, 107, 110, 111, 112, 113, 114, 115 EB, 116, 118, 121 EB, 961, 962, 967 SB
<b>Routes requiring revising -early running</b>	1, 2 NB, 3, 4 WB, 6 EB, 8, 9 SB, 12 WB, 13, 15, 20, 26 SB, 29 SB, 36 NB, 45, 47, 50 NB, 105 SB, 106, 109 EB, 110 NB, 118 NB, 121 WB, 922, 967 NB
<b>Route reliably timed</b>	5, 9 NB, 44 EB, 101, 102, 109 WB, 115 WB, 119, 120

***Average Total Ridership by Trip***

The Service Efficiency Study used farebox data from HRT to calculate the average number of boardings by trip over the period from July through October 2010. This analysis formed the basis of the numerous recommendations to trim specific trips from the schedule, most of which will be implemented in January 2012. Rather than reproducing all of the figures in the TDP, the route-by-route recommendations summary lists the number of trips recommended to cut by time period.

### 3.10 Route-by-Route Recommendations

On the following pages, recommendations from the Service Efficiency (SE) Study, the Comprehensive Operations Analysis (COA), and new service planning concepts developed in the TDP are summarized and discussed. Service increases recommended in the SE Study are discussed in chapter 4 and are not listed here. Table 3.16 below provides an overview of the service recommendations by route, and on the following pages a table for each route summarizes the rationale for the TDP recommendation.

**Table 3.16 Overview of TDP Service Recommendations by Route**

Route	TDP Summary Recommendation
1	Proceed with SE Study recommendations and route split at Pleasure House/Shore Drive
2	Proceed with SE Study changes
3	Proceed with SE Study changes.
4	Proceed with SE Study changes.
5	Proceed with SE Study changes.
6	Proceed with SE Study changes.
8	Proceed with SE Study changes and new restructuring plan (see Route 15).
9	Proceed with SE Study changes. Evaluate ridership after The Tide implementation and consider truncation at NSU after transfer center moved to Wood Street.
11	Proceed with SE Study changes.
12	Extend span of service to 10:45 p.m.
13	Proceed with SE Study changes.
14	Proceed with SE Study changes. Extend span of service to 10:45 p.m.
15	(Plus new Route 21.) Proceed with SE Study changes. Proceed with new restructuring plan.
16	New route
17	Monitor ridership, especially in the evening and on weekends.
18	Proceed with new concept.
20	Proceed with SE Study changes. Explore limited-stop overlay. Eliminate Pacific Avenue segment.
23	Proceed with SE Study and COA recommendations in the peak period
25	Proceed with and SE Study recommendations. Extend to 10:45 p.m. to match LRT operating window.
26	Proceed with SE Study recommendations.
27	Proceed with SE Study recommendations. Extend to 10:45 p.m. to match LRT Operating window.
29	Proceed with SE Study recommendations.
30-32, 34	Proceed with SE Study recommendations. (Not covered by COA.) Consider year-round operation of Route 30.
33	Proceed with SE Study recommendations. Cut back to 19 <sup>th</sup> /Pacific.
36	Proceed with SE Study and COA recommendations. Consider extension to Virginia Beach Municipal Complex.
37	Eliminate route.

Route	TDP Summary Recommendation
41	Proceed with SE Study recommendations.
43	Monitor ridership.
44	Proceed with SE Study.
45	Proceed with SE Study changes.
47	Proceed with SE Study recommendation.
50	Proceed with SE Study recommendation.
57	Proceed with SE Study recommendation.
58	No changes.
64	Proceed with SE Study recommendation.
101	Proceed with SE Study changes and consider interlining options.
102	Proceed with SE Study changes.
103	Proceed with SE Study changes.
104	No changes.
105	Proceed with SE Study changes. Consider removing extension to Sentara.
106	Proceed with SE Study changes. Implement broader restructuring plan.
107	Proceed with SE Study changes and broader restructuring plan.
109	Proceed with SE Study changes and COA recommendations.
110	Proceed with SE Study changes and COA recommendations.
111	Proceed with SE Study changes and new recommendations.
112	Proceed with SE Study changes and new restructuring plan.
113	Proceed with full elimination.
114	Proceed with SE Study changes and COA recommendations.
115	Proceed with SE Study changes and COA recommendations.
116	Proceed with SE Study changes and new restructuring plan.
117	Proceed with SE Study changes and COA recommendations.
118	Proceed with SE Study changes and new restructuring plan.
119	New restructuring plan.
120	Proceed with SE Study changes and COA recommendations.
121	Proceed with SE Study changes.
400 Series	Maintain current service.
918, 919, 922	No changes.
960	Proceed with SE Study changes.
961	Proceed with SE Study changes.
962	Proceed with SE Study changes.
963	Route eliminated in May 2011.
967	Proceed with SE Study changes.

### Route 1

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut fringe trips and reduce peak	Split at Amphibious Base; append outer portion to Route 36	Long route - running time issues	Split route at Pleasure House/Shore Drive instead. Outer end appended to Route 36. More bus connections available here than at Amphibious Base	
<b>TDP Recommendation:</b> Proceed with SE Study recommendations and route split at Pleasure House/Shore Drive				

### Route 2

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut fringe, eliminate Saturday short line	None			
<b>TDP Recommendation:</b> Proceed with SE Study changes				

### Route 3

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut late night and peak	None			
<b>TDP Recommendation:</b> Proceed with SE Study changes.				



#### Route 4

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut fringe , one AM and two PM trips	Reconfigure lower portion into a loop	Poor performance/ one way loop will mean cut in service	Currently hourly bi-directional service.	Route has been changed (August 2011) with introduction of new Route 16
<b>TDP Recommendation:</b> Proceed with SE Study changes.				

#### Route 5

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut two early AM trips	Reroute from Wards Corner to Evelyn Butts	More transfer opportunities	COA has already been implemented.	
<b>TDP Recommendation:</b> Proceed with SE Study changes.				

#### Route 6

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut short trips; make all service hourly	Coordinate 6 and 13; extend to Greenbrier	Improve effective headway on shared segment	Do not extend to Greenbrier	
<b>TDP Recommendation:</b> Proceed with SE Study changes.				

### Route 8

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut last trip	Cut segment east of Evelyn Butts (moved to Rt 15)	Low ridership	Move eastern segment to new Route 21 instead	
<b>TDP Recommendation:</b> Proceed with SE Study changes and restructuring plan (see Route 15).				

### Route 9

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut two early AM trips	Cut diversion on Widgeon and Philpotts; terminate at NSU	Low ridership and running time issues	COA recs seem reasonable. Tide connects to DT from NSU. Once transfer center moved to Wood Street, consider truncation at NSU.	
<b>TDP Recommendation:</b> Proceed with SE Study changes. Evaluate ridership after The Tide implementation and consider truncation at NSU after transfer center moved to Wood Street.				

### Route 11

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut half of service to hour headway	Cut to hourly service	Low ridership		
<b>TDP Recommendation:</b> Proceed with SE Study changes.				

### Route 12

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
None	Extend span to 10:00 p.m.	Better service to TCC	Currently ends at 6:45 p.m., so this is worthwhile, but not late enough for TCC classes.	Eliminate diversion along Military Highway/Auburn/Providence; stay on Indian River Road.
<b>TDP Recommendation:</b> Extend span of service to 10:45 p.m.				

### Route 13

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut midday short turns	Restructure southern portion. Terminate at Chesapeake General Hospital	Allow for service to Greenbrier	Route 14 has been established serving southern portion. Route now ends at Robert Hall.	
<b>TDP Recommendation:</b> Proceed with SE Study changes.				

### Route 14

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut one early AM trip	Did not exist	n/a	n/a	Service extended to the Chesapeake Community Service Board on Great Bridge Boulevard and Walmart on Dominion Boulevard in August 2011.
<b>TDP Recommendation:</b> Proceed with SE Study changes. Extend span of service to 10:45 p.m.				

### Route 15 (plus new Route 21)

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut peak period short turns	Cut service to Robert Hall. Split at Evelyn Butts. Extend northern segment to Amphibious Base (replace Route 8).	Forestall running time issues. Focus service in Greenbrier	Alternative plan: Route 15 would travel between Evelyn T. Butts and Robert Hall Boulevard & Evelyn T. Butts and Greenbrier Mall, with key stops at Military Circle Mall and the Military Highway Tide station. Service north and west of Evelyn T. Butts would be taken over by new Route 21.	Route 21 takes over northwest segment of Route 15 and northeast segment of Route 8; provides new connection from Naval Air Station to Amphibious Base.
<b>TDP Recommendation:</b> Proceed with SE Study changes. Proceed with new restructuring plan.				

### Route 16

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
n/a	n/a			Allows for Route 4 restructuring
<b>TDP Recommendation:</b> New route implemented with The Tide.				

### Route 17

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Change to include Ghent area service.	n/a			Allows for Route 4 restructuring
<b>TDP Recommendation:</b> Monitor ridership, especially in the evening and on weekends.				

**Route 18**

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut first and last trip	Terminate at NSU, improve headway to 40 minutes	Poor performer, but lifeline route.	Maintain service to downtown Norfolk	Continue on Chesapeake to Norview to Azalea Garden to Little Creek to Amphibious Base. Serves Little Creek East Shopping Center.
<b>TDP Recommendation:</b> Proceed with new service concept.				

### Route 20

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut three supplemental peak trips	Look at Transit Signal Priority (TSP)	Improve reliability	No routing changes	Explore limited stop overlay. Eliminate deviation along Pacific Avenue
<b>TDP Recommendation:</b> Proceed with SE Study changes. Explore limited-stop overlay. Eliminate Pacific Avenue segment.				

### Route 23

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut first and last trip	Shorten route on both ends	Improve reliability	Evaluate truncations after one year of The Tide service	
<b>TDP Recommendation:</b> Proceed with SE Study and include 15 minute service during peak period.				

### Route 25

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut short trips; make all service hourly	Reroute to Kempsville Road and Providence Road from Princess Anne Road	Low ridership; new area has higher population density	Do not divert. Princess Anne is more commercial.	Route extended to the Virginia Beach Municipal Center as of August 2011. Extend span to 10:45 p.m.
<b>TDP Recommendation:</b> Proceed with SE Study changes. Extend span to 10:45 p.m.				

### Route 26

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut first Southbound trip and last Northbound trip	Restructure; cut link to TCC, reroute to Pembroke East	Low ridership; serve new area	Bonney Road has high density with low auto ownership but with Route 29 cutback, Route 26 must stay as it is.	Create new route to provide connection via Bonney Road (see Ch. 4)
<b>TDP Recommendation:</b> Proceed with SE Study recommendations.				

### Route 27

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
None	None	Performs well		Extend to 10:45 p.m. to match LRT operating window.
<b>TDP Recommendation:</b> Extend to 10:45 PM. to match The Tide operating window.				

### Route 29

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut first and last trip	Split at Hilltop Shop Center; minor reroutes	Improve reliability	Route has already been cut back to Lynnhaven Parkway. No further changes.	
<b>TDP Recommendation:</b> Proceed with SE Study recommendations.				



**Route 30-32, 34 (VB Wave)**

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
30 - Revise frequency	n/a	n/a		Operate Route 30 at 30 minute headway during off-season
31 - Cut early and late service; expand headway to 20 min.	n/a	n/a		
32 - Cut first and last trip	n/a	n/a		
34 – No change	n/a	n/a		
<b>TDP Recommendation:</b> Proceed with SE Study recommendations. Consider year-round operation of Route 30.				

**Route 33**

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut five trips in each peak period, resulting in hourly service	None			Cut back to 19 <sup>th</sup> /Pacific
<b>TDP Recommendation:</b> Proceed with SE Study recommendations. Cut back to 19 <sup>th</sup> /Pacific.				

### Route 36

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut five trips after 7:30 p.m. and one early trip	Combine with eastern part of Route 1	Need to do something after splitting Route 1	Take over outer Route 1 segment to Pleasure House/Shore Drive	Extend route to VB Municipal Complex via Holland. Extend service from Princess Anne Road to Dam Neck Road to Holland Road to better serve Landstown Shopping Center.
<b>TDP Recommendation:</b> Proceed with SE Study and COA recommendations. Consider extension to Virginia Beach Municipal Complex.				

### Route 37

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Full elimination	n/a	n/a	Headway changed to 70 minutes in May 2011	Elimination seems appropriate
<b>TDP Recommendation:</b> Eliminate route.				

### Route 41

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut two supplemental peak trips	Serve Cavalier Industrial Park; revise schedule to clockface		Very minor tweak	
<b>TDP Recommendation:</b> Proceed with SE Study and consider COA recommendation for a clockface schedule.				

### Route 43

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
n/a	n/a	n/a	n/a	New route replaces 44C
<b>TDP Recommendation:</b> Monitor ridership.				

### Route 44

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut short line all day	Eliminate short line; reroute via Frederick Boulevard to serve Walmart	Low ridership on shortline	Cut shortline, but reroute on Fauquier Street, Scott Street, and Frederick Boulevard back to Turnpike Road to serve Walmart. Avoids cut in service on northbound trips to Cutherell Street and Romanesque Street. Doesn't force pedestrians to cross Frederick Boulevard.	
<b>TDP Recommendation:</b> Proceed with SE Study and consider COA recommendations.				

### Route 45

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut two late night trips	Add outer segment of Route 57 to the 45.	To allow extension to Greenbrier for 57	Do not extend to Greenbrier	
<b>TDP Recommendation:</b> Proceed with SE Study changes.				

### Route 47

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut one evening trip	None			Extend span of service to 10:00 p.m.
<b>TDP Recommendation:</b> Proceed with SE Study recommendation.				

### Route 50

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut two early AM trips	None			
<b>TDP Recommendation:</b> Proceed with SE Study recommendation.				

### Route 57

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut one evening trip	Transfer outer segment to Route 45; extend to Greenbrier	Allow for service to Greenbrier	Do not extend to Greenbrier	Modified in May 2011. Consider cutting Camelot Boulevard diversion
<b>TDP Recommendation:</b> Proceed with SE Study recommendation.				

### Route 58

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
None	Restructure outer end to serve Walmart, TCC, Chesapeake Municipal Center, and Chesapeake General Hospital	Replace segment recommended to be cut from Route 13 (now on Route 14)	Would create an extra transfer for some passengers.	
<b>TDP Recommendation:</b> Proceed with SE Study recommendation.				

### Route 64

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut one AM and one PM trip	None			
<b>TDP Recommendation:</b> Proceed with SE Study recommendation.				

### Route 101

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut one PM and one late night trip	Reduce headway to 30 minutes from 35 minutes		Peak run times are 27 and 28 minutes. Likely would have on-time performance problems with 30-min. headway. May be possible in off-peak.	Consider possible interlines.
<b>TDP Recommendation:</b> Proceed with SE Study changes and consider interlining options.				

### Route 102

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut service after 7:00 p.m.	None	Lifeline service	Poor performance likely due to overlap with other routes	Restructure in conjunction with Route 118 – extend to Thomas Nelson Community College and add service
<b>TDP Recommendation:</b> Proceed with SE Study changes.				

### Route 103

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut four trips	None		Works well, 3 buses on 90 minute cycle.	
<b>TDP Recommendation:</b> Proceed with SE Study changes.				

### Route 104

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
None	None		Works well, 3 buses on 90 minute cycle.	Coverage route in Newport News, so somewhat circuitous.
<b>TDP Recommendation:</b> No changes.				

### Route 105

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut two early AM and one late trip	Extend to Sentara Careplex	More access to Newport News	Schedule looks very tight now. COA claims no increase in vehicles, but looks doubtful	
<b>TDP Recommendation:</b> Proceed with SE Study changes. Considering not extending into Sentara.				

### Route 106

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut six PM peak and one AM peak trip	Truncate at Old Courthouse Road. Route 116 would cover outer segment	On-time performance issues	It is a long route (75 min each way), but would likely force transfers on passengers from swapped segment.	See Newport News restructuring plan below
<b>TDP Recommendation:</b> Proceed with SE Study changes. Implement broader restructuring plan (see below).				

### Route 107

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
None	Truncate at Patrick Henry Mall. Serve outer end with Route 111.	On-time performance issues	Similar to Route 106.	See Newport News restructuring plan below
<b>TDP Recommendation:</b> Proceed with broader restructuring plan.				

### Route 109

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut four late night and one early trip	Eliminate as part of larger restructuring involving routes 115 and 120	Relatively short unique portion	Ridership is mediocre at best. Ridecheck data shows little activity on unique segments.	
<b>TDP Recommendation:</b> Proceed with SE Study changes and COA recommendations.				

### Route 110

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Adjust timing on first trip (move 30 minutes earlier)	Adjust running times	On-time performance issues	Works well, 2 buses on 120 minute cycle.	
<b>TDP Recommendation:</b> Proceed with SE Study changes and COA recommendations.				

### Route 111

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut two AM, two PM and one evening trip (hourly service all day)	Eliminate northern loop	Have trips in both directions to airport	Some ridership on Jefferson, but that segment will be covered by Route 116	Run all service on Jefferson and cut link to airport
<b>TDP Recommendation:</b> Proceed with SE Study changes.				



### Route 112

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut two AM peak and one late night trip	Cut segment to Riverside Regional Medical Center and Christopher Newport University	On-time performance issues	Would be replaced by Route 119 extension. Currently 105 min of scheduled run time. SE study also found a lot of late running.	See Newport News restructuring plan below
<b>TDP Recommendation:</b> Proceed with SE Study changes and new restructuring plan.				

### Route 113

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Retain only two round-trips	n/a	n/a		Eliminate
<b>TDP Recommendation:</b> Proceed with full elimination.				

### Route 114

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut four AM peak trips and one late night trip	Trims to save running time	On-time performance issues	Seem reasonable. No ridecheck data to verify	
<b>TDP Recommendation:</b> Proceed with SE Study changes and COA recommendations.				

### Route 115

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut half of service to hour headway; cut late night service	Combine with Route 120 to form loop	Simplify service in eastern Hampton	Proposal is to operate in both directions, so service should not deteriorate	
<b>TDP Recommendation:</b> Proceed with SE Study changes and COA recommendations.				

### Route 116

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut last trip	Split into 2 routes and extend Warwick Avenue route to Ft. Eustis to replace Route 106	On-time performance issues	Good idea.	See Newport News restructuring plan below
<b>TDP Recommendation:</b> Proceed with SE Study changes and new restructuring plan.				

### Route 117

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut evening trips after 8:00 p.m.	Improve headway from 60 to 30 minutes	Good performer	Could benefit from more service; bus becomes available at no added cost with Route 115/120 restructuring	
<b>TDP Recommendation:</b> Proceed with SE Study changes and COA recommendations.				

### Route 118

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut evening trips after 10:00 p.m. and three trips in PM peak	Trims to save running time	On-time performance issues	Appears Gateway loop has been cut. Suggested routing through Langley makes sense	Restructure with Route 102. Transfer TNCC to 102. Add Sentara Careplex to 118.
<b>TDP Recommendation:</b> Proceed with SE Study changes.				

### Route 119

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
None	Extend to Christopher Newport University	Increase ridership. Headway goes from 40 to 60 minutes	If Route 112 is removed from Christopher Newport University, need to do this.	See Newport News restructuring plan below
<b>TDP Recommendation:</b> Proceed with broader restructuring.				

### Route 120

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut first trips and all trips after 9:00 p.m.	Combine with Route 115 in a loop	Simplify service in eastern Hampton	See above under Route 115	
<b>TDP Recommendation:</b> Proceed with SE Study changes and COA recommendations.				

### Route 121

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut half of service; leave one RT in each peak	None			
<b>TDP Recommendation:</b> Proceed with SE Study changes.				

### 400 Series Peninsula Commuters

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Various trips cut	n/a		n/a	Maintain current
<b>TDP Recommendation:</b> Maintain current service.				

### Route 918, 919, 922

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
None	n/a	n/a		
<b>TDP Recommendation:</b> No changes.				

### Route 960

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Run hourly; cut four AM and three PM round trips	n/a		Hourly service began May 22, 2011	
<b>TDP Recommendation:</b> Proceed with SE Study changes.				

### Route 961

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut three AM, one PM and one evening trip	n/a		5:48 a.m., 8:00 a.m., 5:45 p.m. and 6:15 p.m. weekday trips cut May 22, 2011	
<b>TDP Recommendation:</b> Proceed with SE Study changes.				

### Route 962

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut 24 trips	n/a		Hourly peak only service started May 22, 2011	
<b>TDP Recommendation:</b> Proceed with SE Study changes.				

**Route 963**

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Full elimination			Service discontinued May 22, 2011	
<b>TDP Recommendation:</b> Route eliminated in May 2011.				

**Route 967**

Service Efficiency Weekday Change	COA Change	Reason for COA Change	Discussion of COA Change	Other Service Concepts
Cut 15 trips; run peak only			Implemented May 22, 2011	
<b>TDP Recommendation:</b> Proceed with SE Study changes.				

### ***Northern Newport News Restructuring Concept***

The following describes a new service concept for northern Newport News. Depending on the future service level of the Route 106, the plan would either reduce the peak vehicle requirement by two (with 30-minute service on the 106), keep the vehicle requirement the same (with 20-minute service on the 106), or increase the requirement by two (with 15-minute service on the 106). Figure 3.11 shows the overall restructuring concept, while the maps that follow provide more detailed routing information.

#### Routes 106 and 107

Combine into one route (106) from 6<sup>th</sup>/Ivy to Patrick Henry Mall, serving Riverside Hospital. The route would have a 50 minute running time each way, with an all-day headway of 30 minutes, requiring four peak buses. The headway should also be improved to 20 minutes in the peak and 30 minutes off peak, requiring six peak buses (there are currently six peak buses on 106/107 combined). Improve headway to 15 minutes when feasible.

#### Route 111

Run via Jefferson Avenue and Denbigh Boulevard in both directions. No change in vehicle requirements (currently two peak buses).

#### Route 112

Remove segment on J. Clyde Morris Boulevard west of Jefferson Avenue (as per COA), for a 48 minute running time each way. With a headway of 30 minutes, four buses needed. (Current peak requirement is five buses.)

#### Route 116 and New Route 108

Split into two routes (as per COA). The modified Route 116 will run from Patrick Henry Mall via Oyster Point and Warwick to Fort Eustis, for a 32 minute running time each way. New Route 108 would run from Patrick Henry Mall via Jefferson Avenue and Fort Eustis Boulevard to Lee Hall, for a 23 minute running time each way. HRT could interline Routes 116 and 108 to provide a 60-minute headway with two buses. (Current peak requirement is two buses.)

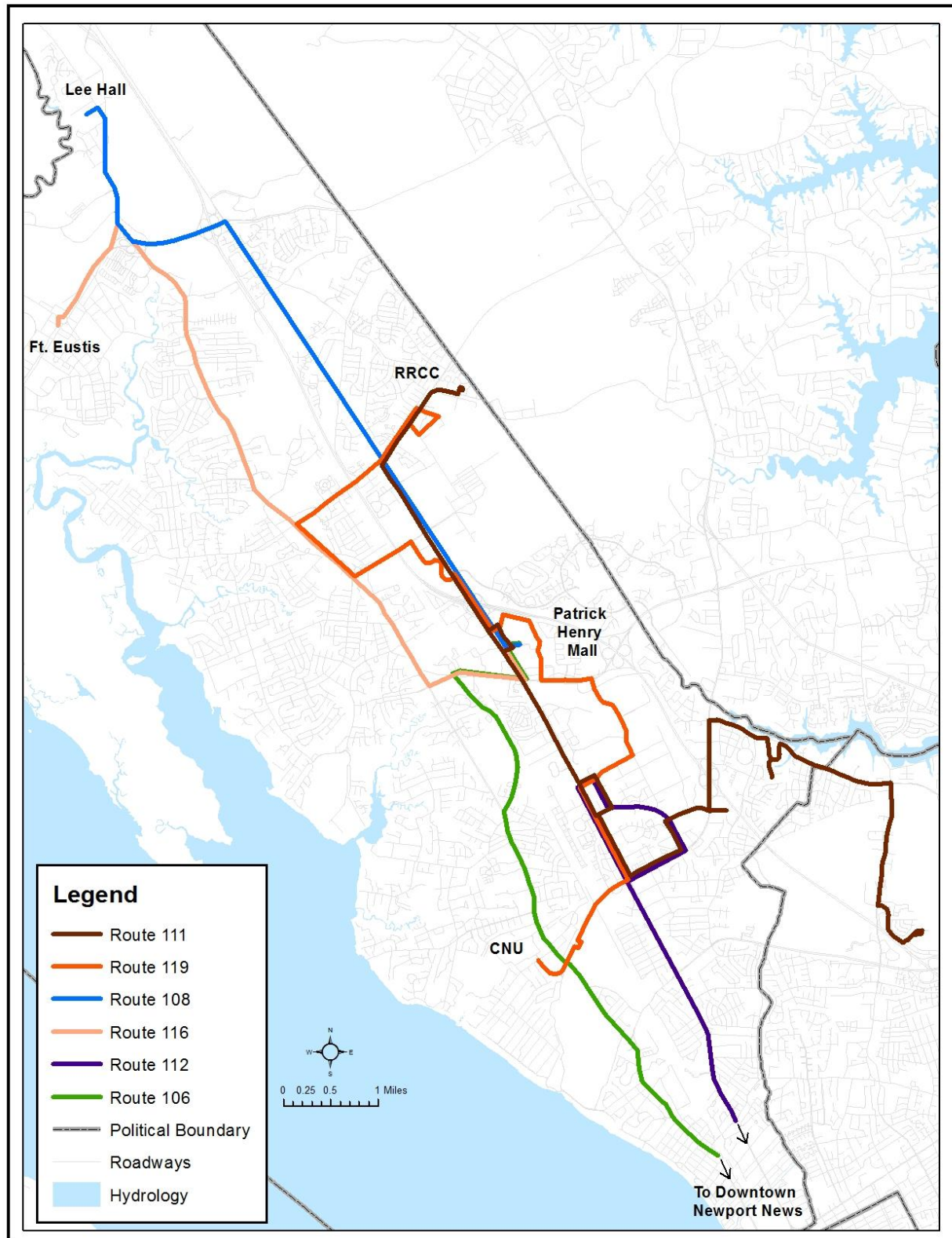
#### Route 119

Extend to Christopher Newport University via J Clyde Morris Boulevard (as per COA). Extend north from Patrick Henry Mall via Route 116 routing and then via Bland, Warwick, and Denbigh Boulevards to Regional Riverside Convalescent Center (RRCC) or another turnaround point in that vicinity to cover outer portion of 107. Eliminate loop on Rock Landing Drive and Omni Boulevard. The route should also operate on weekends, and would have a 50 minute running time each way with a 60 minute headway. Two buses are needed. Current peak requirement is one bus at 40-minute headway.)

#### Summary of Changes

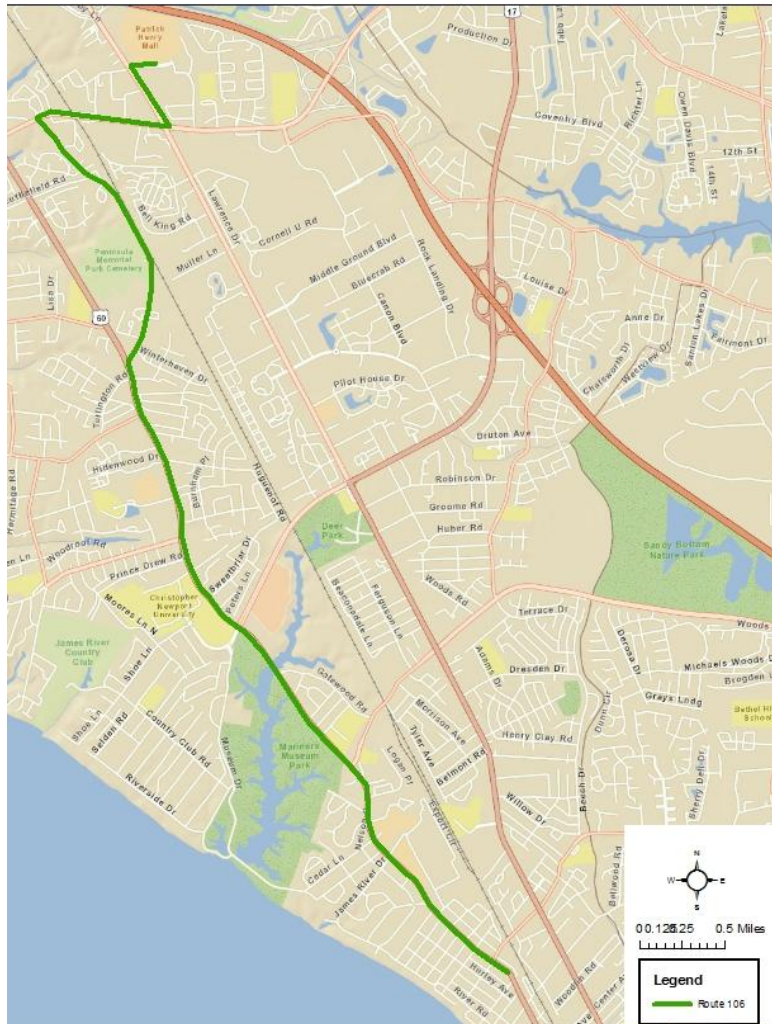
Some current Route 106/107 passengers will need to transfer at Patrick Henry Mall, which would become an important transfer point. This plan should solve the many on-time performance issues experienced in Newport News, and it eliminates awkward cycle times. The plan also eliminates the overlap of Routes 116 and 106, and simplifies Route 116. The role of Route 119 is expanded, with connections to Riverside Hospital, Christopher Newport University and the Riverside Regional Convalescent Center.

**Figure 3.11 Revised Newport News Route Concept**

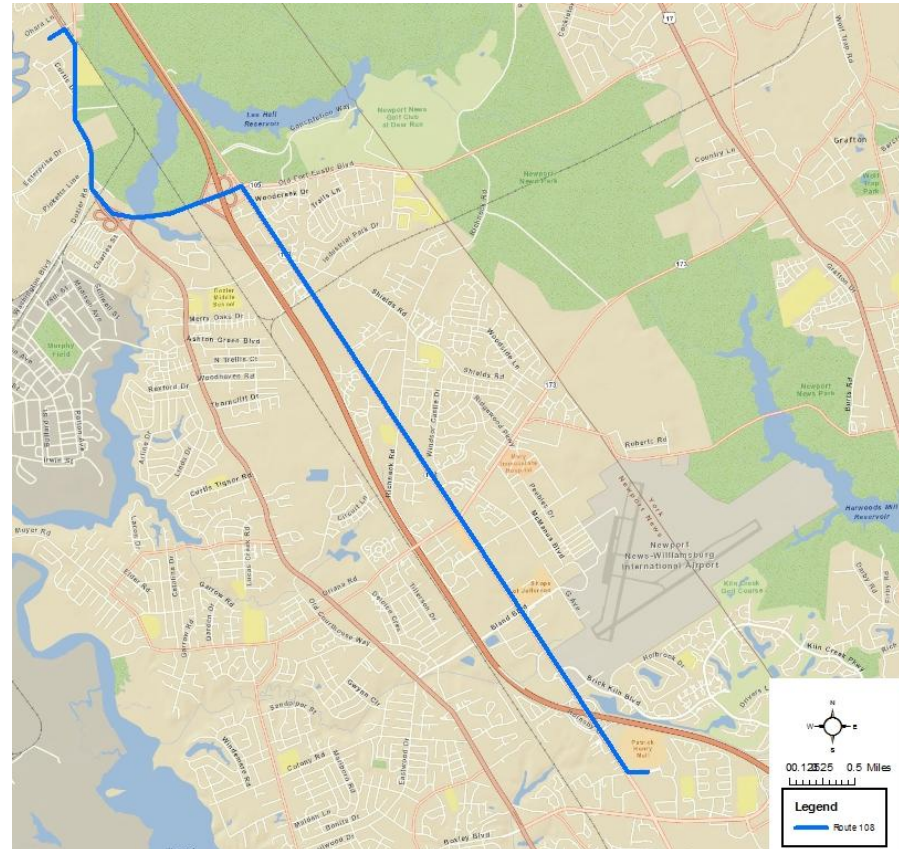




**Modified Route 106 (continues to downtown Newport News)**

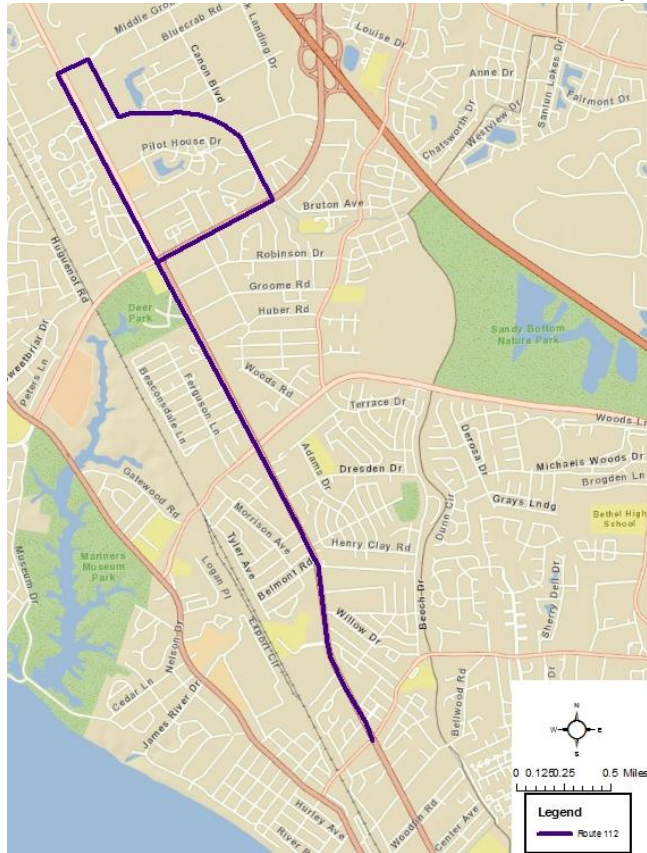


**New Route 108**

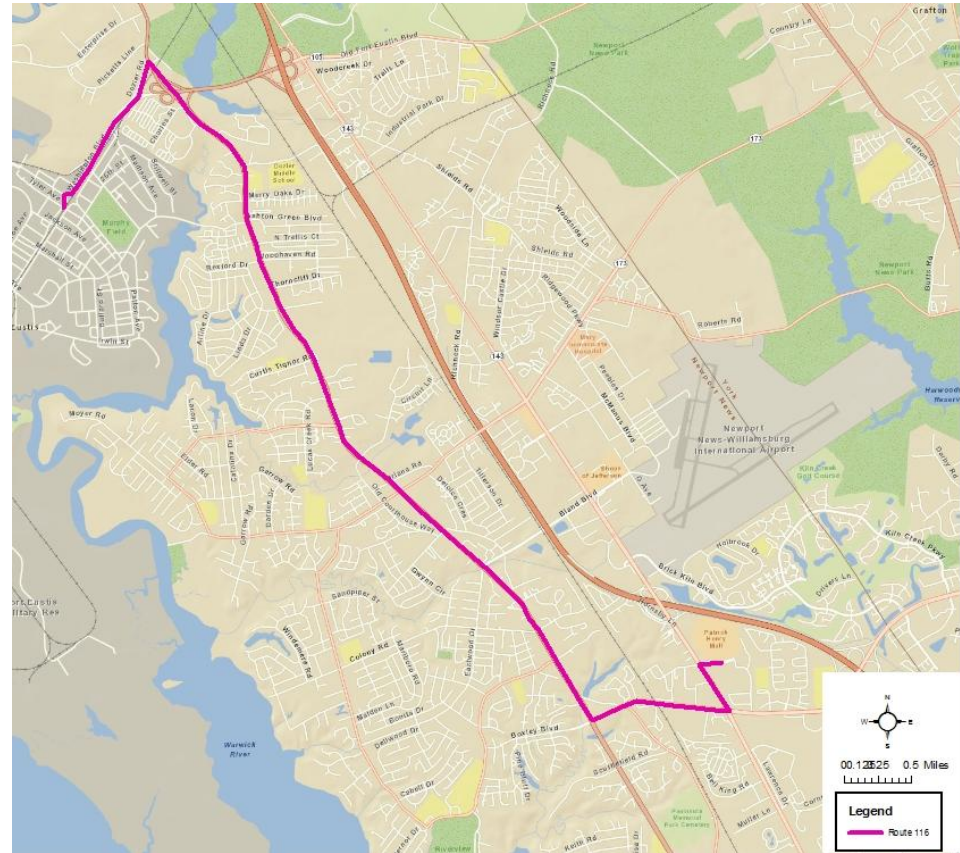




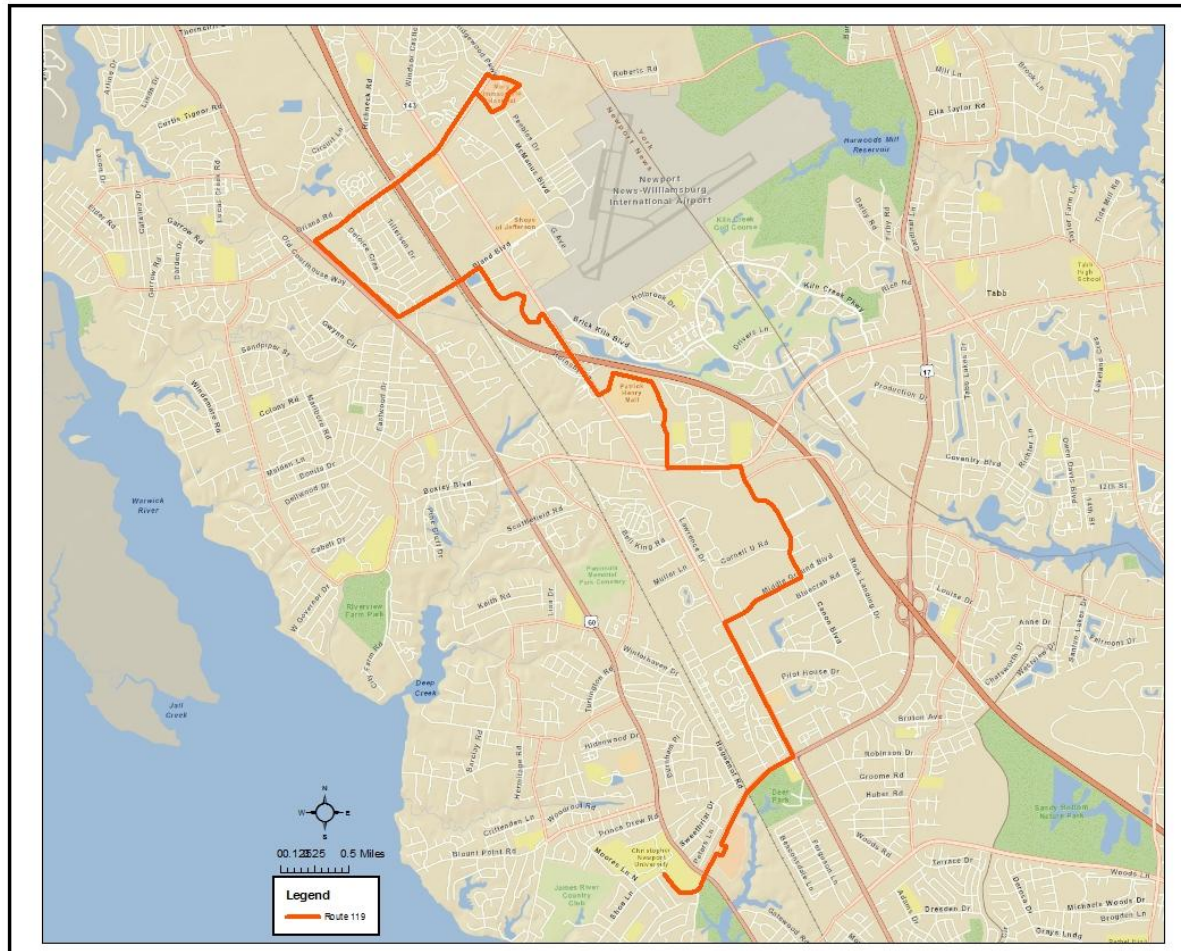
**Modified Route 112 (continues to downtown Newport News)**



**New Route 116**



**Modified Route 119 (extend to Christopher Newport University)**



### 3.11 Capital

#### *Bus Fleet*

The HRT fleet inventory as of August 1, 2011 consisted of 302 vehicles, including 255 diesel buses, 37 hybrid buses and 10 trolley-style buses. A summary of the fleet is listed in Table 3.17.

**Table 3.17 HRT Fleet Composition (August 2011)**

Year	Make	Floor* - Access	Length	Seats	Number
1995	Gillig	HF- Lift	40'	42	22
1999	Gillig	LF - Ramp	35'	32	26
2000	Gillig	LF - Ramp	29'	29	4
2000	Gillig	HF - Lift	40'	42	9
2001	Gillig	HF - Lift	35'	34	24
2002	Gillig	LF - Ramp	35'	35	9
2002	Gillig	LF - Ramp	29'	26	15
2002	Optima	LF - Ramp	29'	23	9
2002	Gillig	LF - Ramp	35'	32	7
2003	Gillig	LF - Ramp	35'	35	1
2003	Gillig	HF - Lift	35'	36	16
2004	Gillig	HF - Lift	40'	41	11
2004	Gillig	LF - Ramp	40'	40	10
2006	Gillig	LF - Ramp	40'	38	22
2006	Optima	LF - Ramp	29'	23	3
2007	Gillig	LF - Ramp	40'	38	40
2007	Gillig	LF - Ramp	40'	41	7
2007	Gillig -Hybrid	LF - Ramp	29'	26	10
2008	Gillig	LF - Ramp	40'	41	7
2008	Gillig	LF - Ramp	40'	38	7
2008	Gillig -Hybrid	LF - Ramp	29'	26	14
2009	Gillig -Hybrid	LF - Ramp	29'	26	2
2011	Gillig	LF - Ramp	40'	38	6
2011	Gillig -Hybrid	LF - Ramp	29'	26	11
1997	Chance - Trolley	HF - Lift	31'	28	9
1999	Chance - Trolley	HF - Lift	31'	28	1

\*(HF=high floor, LF=low floor)

The majority of the fleet, a total of 280 buses, was manufactured by Gillig. The HRT fleet also includes 12 Optima buses and 10 Trolley-style buses manufactured by Chance. HRT acquired 11 Gillig hybrids in June 2011 to replace the Chance trolleys, which are now considered “excess.” Although not specifically identified in the HRT fleet roster, 38 of the older buses are also “excess,” while 18 of the 1995 Gillig



buses are noted as “contingency” buses. Excess buses are buses that have been decommissioned and will be disposed of, while contingency buses can be put into service if needed.

The bus fleet service requirements are presented in Table 3.18. The current peak schedule requirement of 205 increased to 220 in August 2011 with the implementation of a feeder bus service plan to support the opening of The Tide light rail service. Disregarding any service changes that may be recommended in the TDP, the FY2012 fleet requirements are projected to continue through FY2017.

**Table 3.18 HRT Bus Fleet Service Schedule Requirement**

	June 2011	FY2012	FY2013-17
<b>Peak Requirement</b>	205	220	220
<b>20% Spare Allowance</b>	41	44	44
<b>Total</b>	246	264	264
<b>Contingency Fleet</b>	18	0	0
<b>Decommissioned fleet</b>	38	38	0
<b>Total Fleet</b>	302	302	264

The active fleet of 264 buses (302 total less the 38 decommissioned buses) has an average age of approximately 6.75 years. HRT policy is to replace a bus after 14 years of service, thereby seeking to maintain an average fleet age of seven years.<sup>22</sup> As shown in Table 3.19, over the next six years HRT plans to purchase 105 replacement buses, split between 29-foot, 35-foot, and 40-foot heavy duty buses.

**Table 3.19 HRT Six-Year Bus Fleet Replacement Plan**

Year	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	Total
<b>29 - foot</b>	0	0	4	0	12	13	29
<b>35 - foot</b>	9	5	0	0	0	0	14
<b>40 - foot</b>	0	0	20	23	12	7	62

It is assumed that the oldest buses remaining in the fleet will be the first replaced each year as new buses are delivered, accepted and placed into service. In addition it is expected that HRT will formally retire and begin to dispose of the 38 excess buses early during this upcoming period. The average age of the fleet in FY2017 is projected to be approximately 6.90 years, with the oldest bus at 14 years of service.

As noted above, service requirements over the next six-year period (service expansion recommendations of this TDP notwithstanding) are not expected to change peak bus schedule needs. Thus, the total fleet needs as reported in Table 3.15 should be reduced to 264 buses by FY2013 with this fleet size held constant to the end of the TDP six-year plan cycle. Table 3.20 presents the expected fleet composition at the end of the six-year period. It is assumed that HRT will continue to purchase low floor buses accessible with a ramp, and that the seating configuration will be the same as the most recently purchased buses of the same length.

<sup>22</sup> The FTA has adopted a minimum life of 12 years for 35 to 40 foot heavy duty buses and 10 years for smaller heavy duty buses. In the FTA-sponsored study *“Useful Life of Transit Buses and Vans”* published in April 2007 the authors report that many transit operators assume a life span greater than the minimum, often based upon mileage considerations. For example, WMATA programs a life span of 15 years for their fleet.

**Table 3.20 Projected HRT Fleet Composition (FY2017)**

Year	Make	Floor -Access	Length	Seats	Number
2003	Gillig	HF -Lift	35'	36	9
2004	Gillig	HF - Lift	40'	41	11
2004	Gillig	LF - Ramp	40'	40	10
2006	Gillig	LF - Ramp	40'	38	22
2006	Optima	LF - Ramp	29'	23	3
2007	Gillig	LF - Ramp	40'	38	40
2007	Gillig	LF - Ramp	40'	41	7
2007	Gillig -Hybrid	LF - Ramp	29'	26	10
2008	Gillig	LF - Ramp	40'	41	7
2008	Gillig	LF - Ramp	40'	38	7
2008	Gillig -Hybrid	LF - Ramp	29'	26	14
2009	Gillig -Hybrid	LF - Ramp	29'	26	2
2011	Gillig	LF - Ramp	40'	38	6
2011	Gillig -Hybrid	LF - Ramp	29'	26	11
2012	Future	LF - Ramp	35'	36	9
2013	Future	LF - Ramp	35'	36	5
2014	Future	LF - Ramp	40'	38	20
2014	Future	LF - Ramp	29'	26	4
2015	Future	LF - Ramp	40'	26	23
2016	Future	LF - Ramp	40'	38	12
2016	Future	LF - Ramp	29'	26	12
2017	Future	LF - Ramp	40'	38	7
2017	Future	LF - Ramp	29'	26	13

As reported in Table 3.21, over the six-year period the size distribution for the HRT fleet will change, with an increased proportion of 40 foot buses replacing the smaller 35 foot buses. The number of 29 foot buses will remain largely unchanged, increasing by one. The average seats per bus will increase marginally from 34.4 for the 2011 fleet to 35.0 for the projected 2017 fleet, reflecting the shift to more 40 foot buses.

**Table 3.21 Change in HRT Fleet Size Distribution**

Vehicle	Fleet Size 2011	Projected Fleet Size 2017	Change
<b>31 – foot Trolley</b>	10	-	(10)
<b>29 – foot Bus</b>	68	69	1
<b>35 – foot Bus</b>	83	23	(27)
<b>40 – foot Bus</b>	141	172	31
<b>Total Fleet Size</b>	302	264	(38)
<b>Average Active Fleet Age</b>	6.75 years	6.90 years	0.15 years
<b>Average Seats/Bus</b>	34.4	35	0.6

### ***Light Rail Vehicles***

HRT has recently purchased a fleet of nine light rail low floor articulated vehicles from Siemens that are being used on the new The Tide light rail in Norfolk. The new service began revenue service in August 2011. The existing fleet, delivered in 2009, will meet the schedule requirements through the entire six-year TDP planning horizon.

### ***Paratransit Vehicles***

HRT owns 33 paratransit vans and leases an additional 54 paratransit vans from the contractor that operates its paratransit service, MV Transportation, to meet service requirements. All of the 33 paratransit vehicles owned by HRT are the 22.7-foot long, 12-passenger 2007 Ford/Startrans E-465 lift-equipped vans. HRT will continue to own 33 of the vehicles in their paratransit vehicle fleet, and the agency is currently establishing paratransit vehicle replacement and maintenance guidelines.

### ***Ferryboats***

HRT owns three paddle ferry boats that are approaching 30 years of age. These vessels will require major overhaul or alternatively replacement to maintain reliable service.

### ***Vanpools***

HRT owns 74 vanpool vehicles for its Traffix Vanpool Program. The fleet is a mix of 7-, 12-, and 15-passenger vans that it provides to participants in the regional vanpool program.

### ***Bus Garage Maintenance Capacity***

The HRT bus fleet is serviced from three maintenance facilities as follows:

- Northside garage - located on Victory Boulevard in Hampton
- Southside garage - located on 18<sup>th</sup> Street in Norfolk
- Virginia Beach Operations Facility – located on Parks Street in Virginia Beach

The first phase of the 18<sup>th</sup> Street Southside bus maintenance facility complex was opened on June 9, 2011, replacing a facility that was more than 100 years old and had been converted from streetcar use. As of this date, buses are being serviced at the 200,000 square foot maintenance facility. The second phase, expected to be completed in 2012, will provide a 44,000 square foot administration building to replace the existing Monticello Avenue headquarters.

The capacity for a bus maintenance facility can be constrained by a combination of four space limitations:

- 1) Number of repair bays,
- 2) Number of service lanes (e.g. fueling, wash, fare box probing),
- 3) Employee and visitor parking availability, and
- 4) Overnight bus storage space.

These constraints, especially the number of repair bays, can be influenced by fleet design factors such as size of bus (e.g., small, standard, etc.), age and condition of fleet, actual service levels and fleet mileage, fuel type (e.g., low- sulfur or standard grade diesel, CNG, electric, or hybrid), and bus design features (e.g., floor height, AC, smart-bus technology) among other considerations. Maintenance practices such as the amount of vehicle and component repair work done in-house versus contracted to an outside firm will also impact the required number of repair bays. When considering fleet characteristics and maintenance policies, the transit industry have developed targets for operating cost efficient and effective maintenance facilities in terms of typical ratios of fleet size to the number of repair bays and service lanes. A study prepared for WMATA provided a set of commonly applied planning ratios.<sup>23</sup> The authors claim that this method of applying planning ratios to fleet size has been an effective way to determine maintenance bay and service lane needs. The ratios as reported in the study are as follows:

**Maintenance Bays**

Standard Bus Repair Bay	1 Bay for every 15 to 17 Buses
Articulated Bus Repair Bay	1 Bay for every 8 to 10 Buses
Standard Bus Inspection Bay	1 Bay for every 50 Buses
Articulated Bus Inspection Bay	1 Bay for every 30 Buses

**Service Lanes**

Fueling	1 Lane for every 75 to 90 Buses
Washing	1 Lane for every 150 Buses

As many transit operators do not distinguish between repair and inspection use for their garage bays, a weighted average ratio for the combined use is approximately one bay for every 12 to 13 buses for standard heavy duty transit buses.

Table 3.22 presents a summary assessment of the maintenance capacity for the HRT north side and south side facilities and the Virginia Beach facility. All facilities provide adequate capacity for repair, fueling, and storage. At the 18<sup>th</sup> Street facility, there is room for storing 28 additional buses, while the Victoria Boulevard maintenance facility has room for many more buses based on its storage capacity; an additional 76 buses could fit based on storage capacity alone, although maintenance bay capacity would limit the fleet growth to only 39 more buses. As the total fleet size is expected to be reduced as excess vehicles are retired, overall the HRT facilities provide capacity to support growth in the fleet for service expansion in the years beyond the TDP six-year planning horizon; however, growth in the southern part of the service area may be limited by bus storage constraints at the 18<sup>th</sup> street garage.

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<sup>23</sup>*Regional Bus Study – Garage Plan*, prepared for Washington Metropolitan Area Transit Authority by Maintenance Design Group in association with Multisystems/DMJM-Harris, April 2002.



The 18<sup>th</sup> Street facility has more than sufficient wash functions for the June 2011 fleet, while Victoria Boulevard falls below the typical standard. The North Side facility in Hampton also has a 4 bay body shop that HRT uses to perform body repair work on the entire fleet.

**Table 3.22 HRT Bus Maintenance Capacity Assessment Summary**

	18 <sup>th</sup> Street (South Side) Norfolk	Victoria Blvd (North Side) Hampton	Operations Facility Virginia Beach
<b>Revenue Fleet – June 2011</b>	157	104	41*
<b>Active Fleet</b>	153	90	31
<b>Peak Requirement – June 2012</b>	115	64	26
<b>Peak Need plus 20% Spares</b>	138	77	31
<b>Bus Storage Capacity</b>	185	180	35
<b>Standard Repair Bays (includes Inspection)</b>	17	11	4
<b>Fueling Stations</b>	3 lanes	1 lane w/ 2 pumps	1
<b>Wash Lanes</b>	1	3	0
<b>Rev-Fleet/Repair Bay</b>	9.2	9.5	10.3
<b>Rev-Fleet/Fuel Station</b>	66	52	41
<b>Rev-Fleet/Wash Lane</b>	198	35	-

\* Includes 29 hybrids

#### ***Light Rail Maintenance Capacity***

HRT owns the Norfolk The Tide Facility, or Vehicle Storage and Maintenance Facility (VSMF), which serves HRT's nine light rail vehicles (LRV). In addition, HRT leases a rail operations facility on Mangrove Avenue that is used for storage and administrative offices.

The VSMF allows for the following main functions:

- Daily operation of the service, e.g., dispatch and supervision
- Regular servicing and inspection, e.g., preventative maintenance and vehicle cleaning
- Major vehicle maintenance, e.g., running repairs and scheduled major maintenance
- Non-vehicle maintenance and maintenance of way, e.g., fare machine maintenance and track and structures
- Administrative functions, e.g., personnel and labor relations

According to the VSMF Capacity Review conducted by the Maintenance Design Group in March 2011, the VSMF occupies the parcel of land bounded by Norfolk State University (NSU) on the north, I-264 on the south, Brambleton Avenue on the west and Ballantine Street on the east. The facility includes a storage yard designed to accommodate nine light rail vehicles; additional yard space is not available for light rail service expansion, either for an extension to the system or increased frequency on the initial The Tide segment.

The VSMF also includes a maintenance shop, a light rail vehicle wash bay, maintenance of way (MOW) storage and lay down yard, a traction power substation, and HRT vehicle storage, employee parking and

necessary access roads. The VSMF design assumes that LRV's will be operated singly but the track layout can accommodate two-car and three-car train sets.

The basic adequacies and deficiencies related of various parts of the facility, as identified in the Capacity Review are shown in Table 3.23.

**Table 3.23 Sufficiency of the Tide Vehicle Storage and Maintenance Facility**

Area	Adequacy/Deficiency
<b>Office and Support Areas</b>	Limited, and cannot be easily expanded.
<b>Shop Areas</b>	May need to be rearranged to function more effectively
<b>LRV Maintenance and Repair Positions</b>	Arrangement of equipment is not optimal.
<b>Storage Areas</b>	Storage areas are sufficient.
<b>LRV Wash Bay</b>	Sufficient for fleet expansion if needed.
<b>LRV Storage</b>	Sufficient for up to 15 LRVs
<b>Yard Movements and Yard Track Characteristics</b>	No deficiencies

### ***Ferry Facilities***

HRT serves four ferry docks for its Paddlewheel Ferry service: Waterside in Norfolk and High Street and North Landing in Portsmouth; a dock at Harbor Park in Norfolk is used only during Norfolk Tides baseball games, although it may become the primary dock in Norfolk when the future Harbor Park transit center opens. HRT owns the water-side portions of the docks, while the cities own the part of the docks that are on land. Regular ferry maintenance is performed at the docks, and all maintenance equipment and parts are owned and stored with the contractor who operates the service. Ferry service is operated under contract to a private provider, Norfolk by Boat.

### ***Bus Stops***

HRT buses service 3,500 stops, the majority of which consist of a just a bus stop sign. The current signs provide minimal information, often nothing more than identifying the location as a bus stop, and are often mounted on whatever was available, including telephone poles and other street sign poles. As part of a funded program, HRT will be replacing signs at all bus stops. The new signs will be on dedicated poles and will include information about routes and schedules that serve the stop.

### ***Bus Shelters***

There are 199 shelters in the HRT system, most of them at the major transfer centers and other transfer locations. Beginning in FY 2011, three cities (Virginia Beach, Chesapeake, and Newport News) have set aside funding for shelters with Congestion Management Air Quality (CMAQ) funding. Another federal funding program, Job Access Reverse Commute (JARC), grant funds are available to HRT to provide in locations that meet certain criteria. Beginning in FY 2013, HRT will use transit-enhancement funding to provide shelters across its service area. Under a funded program for shelter improvements, HRT will be replacing some of the older shelters with new ones and also adding shelters at high volume stops. As part of the Comprehensive Operations Analysis (COA) completed in 2009, a threshold of 25 boardings per day was used as an indicator that a stop necessitated a bench, and 50 boardings per day indicated that a stop necessitated a shelter. These are reasonable thresholds for HRT to follow as it proceeds with its bus shelter program.

### ***Transfer Centers***

HRT refers to any bus stop that is served by more than one bus route a “transfer center,” although these centers are not all the same. There are 42 of these “transfer centers” in HRT’s service area (see Table 3.24). At the extreme end, the transfer centers in Hampton and Newport News consist of a bus loop with shelters and an indoor, climate-controlled, staffed waiting area with seats, customer services (e.g. security and transit supervisory personnel), ticket vending machines, transit information, and restrooms (Figure 3.13). The Hampton facility also provides separate waiting areas for local taxi services and intercity buses. Each facility includes a dedicated off-street bus way with eight bus berths at each, all with a standard passenger waiting shelter. Both facilities are in need of general repair. In addition, the Hampton busway could use resurfacing. HRT plans to replace the bus shelters as part of their Passenger Shelter program. Otherwise the locations and general layouts are well designed and sited close to each city’s downtown district. The Hampton Transit Center is served by 11 HRT bus routes while nine routes service the Newport News center.

The Hampton and Newport News Transfer Centers both have a commuter parking facility that is owned and maintained by the municipality. Hampton has an approximately 150 space lot, while Newport News has fewer than 20 spaces right at the transfer center but a municipal lot across the street has over 100 spaces. However, at the present time only less than 1% of bus riders access the service by automobile, so the lots are not well-utilized by HRT passengers.

The larger transfer centers on the Southside of the service area consist of off-street bus loops with shelters along a right-of-way dedicated to HRT bus use only, but otherwise no passenger amenities. Oftentimes, the larger transfer centers on the Southside are tucked away wherever the municipality finds room for the facility, in many cases in a location not immediately convenient to the origins and destinations of the bus passengers. For the most part these centers are situated off-street but are generally removed and/or isolated visually from neighboring land uses. For example, the Victory Crossing transfer center in Portsmouth is located on property that abuts Interstate 264 on the opposite side from the Victory Crossing Shopping Center as opposed to closer to existing destinations (Figure 3.14). Finally, there are locations called “transfer centers” at other locations served by multiple routes, which often have shelters but can also be nothing more than a bus stop sign. Currently, HRT’s main transfer center in Norfolk, Cedar Grove, is not in a desirable location and HRT is working with the city to move transfer operations to an on-street transfer area on Wood Street, closer to the downtown area.

At the Cedar Grove transfer center, the busway and the pedestrian waiting area are separated solely by a painted yellow line rather than a raised safety curb as exists at many of the other transit centers. As shown in the photo in Figure 3.12, the Cedar Grove site is separated from a large parking facility by a series of stand-alone reflective barriers.

**Table 3.24 Locations of Current Transfer Centers and Transfer Locations**

ID	Location	Routes Served	Shelters	Category Type
1	Newport News Transit Center	101, 103, 104, 105, 106, 107, 112, 961, 967	8	1
3	Hampton Transit Center	101, 102, 103, 109, 110, 114, 115, 117, 118, 120, 961	8	1
2	NET Center	104, 110, 112, 114	2	2
24	McLean St/Cavalier Blvd (Victory Crossing)	41, 44, 45, 50, 57, 962	6	2
27	Wards Corner	1, 15, 961	4	2
28	Military Circle Mall	15, 20, 23, 25, 27	2	2
30	Pembroke East	1, 20, 36	3	2
34	Cedar Grove	1, 2, 3, 4, 6, 8, 9, 11, 13, 18, 20, 23, 45, 310, 960, 961	10	2
45	Suffolk Bus Plaza (Cherry St/Poplar St)	71, 72, 73, 74	2	2
6	Thomas Nelson Community College	110, 111, 118	1	4
7	Patrick Henry Mall	107, 111, 113, 116, 119, 121	1	4
8	Riverside Hospital	106, 107, 112	1	4
12	Warwick Blvd/Denbigh Blvd	106, 107, 116	2	4
17	73 St/Warwick Blvd	106, 107, 114	1	4
22	Washington Ave/26th St	101, 104, 105, 106, 107	4	4
23	Navy Exchange Mall	2, 3, 15, 919, 922	2	4
25	Norfolk General Hospital	2, 4, 23, 44	2	4
26	Duffy's Lane (Ocean View Ave./Granby St.)	1, 3, 5	2	4
29	Robert Hall Blvd Shopping Center	6, 13, 14, 15, 57, 58	1	4
31	Pacific Ave/19th St	20, 33, 960	2	4
32	20th St/Seaboard Ave	6, 12, 13, 58	2	4
33	Little Creek Blvd/Evelyn T. Butts Ave	3, 5, 8, 9, 15, 961	2	4
35	Tidewater Community College	12, 26, 33, 36, 29	1	4
36	Hampton Blvd/Little Creek Rd	2, 15	1	4
38	Pleasure House Rd/Shore Dr	1, 27, 29	2	4
39	First Colonial Rd/Laskin Rd	20, 29	1	4
41	High St/Florida Ave	43, 44, 47	2	4
43	County St/Court St	41, 43, 45, 47, 50, 962	2	4
44	Fishing Point and Middle Ground	111, 112, 119	3	4
4	Settlers Landing/Armistead Ave	101, 103, 110, 118		5
5	Peninsula Town Center	102, 105, 113, 114, 118		5
9	Fort Eustis	106, 113		5
10	Riverside Regional Convalescent Center	107, 111		5
11	Denbigh Blvd/Jefferson Ave	107, 116		5
13	Thimble Shoals/Diligence Dr	111, 112		5
14	Coliseum Dr/Marcella Rd	102, 118		5
15	Pine Chapel Rd/Saville Row	114, 118		5
16	Mercury Plaza	102, 105, 114		5
18	48th St/Marshall Ave	104, 105		5
19	35th St/Chestnut Ave	103, 104		5
20	Washington Ave/39th St	105, 106, 107		5
21	26th St/Jefferson Ave	101, 104, 105, 106, 107		5
37	Little Creek Amphibious Base	1, 8		5

ID	Location	Routes Served	Shelters	Category Type
40	Lynnhaven Mall	26, 29, 37		5
42	Chesapeake Square Mall	44, 962, 967		5
Total Shelters			78	

**Figure 3.12 Cedar Grove Transfer Center**



**Figure 3.13 Newport News Transfer Center**



**Figure 3.14 Victory Crossing Transfer Center**



The TDP recommends categorizing the transfer centers by level of activity in order to make it easier for HRT staff to identify the types of passenger amenities that belong at each, and also to help the riding public know what type of facilities they can expect at the various transfer points. A more detailed nomenclature is suggested below, and the facilities that fall into these different classes of bus stops are shown in Table 3.25. The numbers in the table reflect the number of locations that currently fall within each category; these numbers may be adjusted in the future as HRT improves facilities based on the level of boardings at various locations.

1. Transfer Center – Off-Street bus ways with high activity, multiple routes, and multiple bus berths. In HRT's system, most of these transfer centers do not have enclosed passenger facilities, but have standard passenger shelters at multiple bus berths. Two transfer centers on the Peninsula have passenger facilities that include amenities such as indoor waiting area, restrooms, trash receptacles, fare ticket machines, and customer services. The locations without facilities should be evaluated to identify if other amenities are needed based on the level of activity.
2. Park and Ride – Commuter parking lots served by connecting bus routes where passenger shelters have been installed.
3. Transfer Points – On-Street Bus stops as designated on the HRT system map which are served by two or more bus routes where passenger shelters have been installed.
4. Transfer Stops – Designated On-Street bus stops served by two or more routes without shelters
5. Enhanced Bus Stops – On-Street bus stops with installed passenger shelters not designated as a transfer point. Although the stops typically serve one route, they may serve multiple routes along a common trunk.
6. Bus Stop at Norfolk Navy Station – On-Street bus stops located within the confines of the Norfolk Navy Station served by HRT bus routes for credentialed personnel.
7. Bus Stops – Typical bus stops on-street lacking any passenger facility



**Table 3.25 Passenger Facility Nomenclature and Facility Summary**

Type	Bus Stop Category	Characteristics	Total Locations	Facility Name (# shelters)	Total Shelters
1	Transfer Center	Off-Street w/ Shelter; Off-Street w/ Shelter and Facilities	9	Cedar Grove (10), Military Circle Mall (2), Ward Corner (4), NET Center (2), Victory Crossing (6), Pembroke Mall (3); Hampton (8), Newport News (8)	43
2	Park and Ride	Parking Facilities	2	Silverleaf Transportation Center (3), Indian River Park and Ride (1)	4
3	Transfer Point	On-Street Bus Stop w/ Shelter	20	(See Table 3.24)	35
4	Transfer Stop	On-Street Bus Stop w/o Shelter	16	(See Table 3.24)	0
5	Enhanced Bus Stop	Bus Stop w/ Shelter	101*		105
6	Bus Stop – Norfolk Navy Station	Bus Stop w/ Shelter	10**		10
7	Bus Stop	No amenities	~3,350		
	Total		~3,500		197

\* Shelters have been removed from three other Bus Stops due to damage

\*\* Shelters owned by Navy Station

### **Parking**

For the bus service, the only mode for which data was available at the time of the TDP, driving as a mode of access accounts for only 1-2% of all boardings, not necessarily due to any parking limitations but because the majority of the passengers do not have a private vehicle available to them. Therefore, for the bus service, the existing parking that exists at the Hampton Transfer Center, the Newport News Transfer Center, and the VDOT-owned lots at the Silverleaf Transportation Center and Indian River are sufficient for providing access to HRT bus service.

For ferry service, there is a city-owned parking facility at the High Street ferry dock in Portsmouth; this facility is adequate to meet the needs of HRT patrons. Of the eleven new The Tide light rail stations, only four will have parking. It is anticipated that the Newtown Road end-of-line station will have more demand for parking than there is supply, and HRT has already begun pursuing shared-use parking arrangements in the area.

### **3.12 Title VI Report**

The most recent copy of the HRT Title VI report dated and submitted to FTA on January 12, 2011 was reviewed to determine what deficiencies were found, if any, and to describe related remedial actions. This review of the Title VI report revealed that no Title VI investigations, complaints, or lawsuits have been filed with HRT since the previous Title VI submission (February 14, 2008).

Table 3.26 summarizes the methods by which HRT evaluates how they are meeting FTA program-specific requirements and guidelines.

**Table 3.26 HRT Evaluation Methods for Title VI FTA Requirements and Guidelines**

Method	Description
<b>Demographic Data/Mapping</b>	<ul style="list-style-type: none"> <li>HRT utilizes demographic data and spatial analysis to determine the minority population percentage of the total population and the low-income population percentage of the total population.</li> <li>HRT uses this information to evaluate how the HRT system is serving these populations and Title VI areas.</li> </ul>
<b>Vehicle Load</b>	<ul style="list-style-type: none"> <li>HRT has established loading standards to maintain acceptable passenger loads onboard buses. The load factor is an indicator of the extent of probable overcrowding or the need for additional vehicles. Load factor calculations are the primary variable used to assess how buses can be effectively and efficiently allocated among different routes.</li> <li>HRT uses this information to analyze the impact of vehicle loads on Title VI areas.</li> </ul>
<b>Vehicle Assignment</b>	<ul style="list-style-type: none"> <li>HRT vehicle assignment is based on route ridership performance and the type of service. Fixed bus routes that operate on local streets within the urban areas with more frequent headways are assigned 29-foot buses. Routes in the suburban areas with longer headways are assigned 35 and 40 foot buses. MAX routes, express, limited stop service that operate along the region's interstate system, are assigned MCI Coach Vehicles.</li> <li>HRT also follows a detailed fleet replacement plan for all vehicles.</li> <li>All vehicles are accessible and are rotated daily among the fixed routes based on service type, as maintenance and repair needs require.</li> </ul>
<b>Vehicle Headway</b>	<ul style="list-style-type: none"> <li>Generally, routes operating in urban areas have 30 minute headways during the peak, although a few routes have 15 minute headways, with one hour headways during the off-peak. Service in the suburban areas generally has one hour headways. It should be noted the specific frequency levels are determined by each sponsoring municipality.</li> <li>HRT uses this information to evaluate service levels to identify any Title VI areas that may be impacted by service frequency.</li> </ul>
<b>On-Time Performance</b>	<ul style="list-style-type: none"> <li>On-time performance for HRT's bus service is measured against the published schedule and actual bus arrival times at 350 designated time points throughout the system. A bus is considered "on-time" if not more than five minutes late at each scheduled time point.</li> <li>Bus on-time performance can be impacted by traffic congestion, detours, weather, a larger than anticipated number of boardings, and boardings of passengers with accessibility needs.</li> <li>HRT utilizes on-time performance data to evaluate the system for poorly performing routes and the potential impacts to Title VI areas.</li> </ul>



Method	Description
<b>Distribution of Transit Amenities</b>	<ul style="list-style-type: none"> <li>Shelters: There are approximately 3,490 stops in the HRT system. As of September 2010, 191 stops have shelters and 151 of these shelters are located in Title VI areas. HRT is working to install new shelters as part of a systemwide shelter program.</li> <li>Signs: HRT is in the process of redesigning and replacing all of its bus stop signs. The signs will convey route designations, diagrammatic route maps, bus route numbers, connecting bus route information (where appropriate), destinations, and access information designed for use by all transit riders. All bus stop signs will have a unique five-digit number on the sign that passengers can use to access route and scheduling information by calling HRT customer service. The new signs will be ADA compliant. It is anticipated that installation of the new signs will commence in July 2011 and be completed in August 2012.</li> <li>Electronic Ticketing Machines: HRT currently has Electronic Ticket Machines at eight locations. There are also two ticket vending machines at each LRT station.</li> </ul>
<b>Service Availability</b>	<ul style="list-style-type: none"> <li>Service availability in each of HRT's cities is set by each municipality. This means that the number of routes, service frequency, and service coverage areas as operated by HRT are directly determined by each city during the annual budgetary cycle. Article IV of HRT's Cost Allocation Agreement describes how transit service in the HRT service district is determined.</li> <li>HRT uses this information to determine the level of service to Title VI areas and potential impacts from the lack thereof.</li> </ul>

### 3.13 FTA Triennial Review

The United States Code, chapter 53 of title 49, requires the FTA to perform reviews and evaluations of Urbanized Area Formula Grant activities at least every three years. The Triennial Review includes a review of the grantee's compliance in 24 areas. The latest report for HRT, completed in June 2010, includes the findings of the review that concentrated primarily on procedures and practices employed during the last three years; however, coverage was extended to earlier periods as needed to assess the policies in place and the management of grants.

The areas for which deficiencies were found during the review include: Technical (D-02, 03, 12, 06); Maintenance (D-04, 10); Procurement (D-13, 16,03,99); and Title VI (D-10). However, prior to the issuance of the final report, two findings were closed: Technical, D-06 and the Title VI finding D-10.

The deficiencies found under "Technical" related to late or deficient Milestone Progress Reports, incorrect Federal Financial Reports, and the lack of a force account for a grant exceeding \$100,000. The deficiencies found under "Maintenance" related to 13 instances where preventative maintenance was performed late. The deficiencies found under "Procurement" related to missing or incorrect documentation and the issuance of a contract for rolling stock or replacement parts with a period of performance of more than five years. The deficiency found under "Title VI" was related to the insufficient dissemination of Title VI public notification.

In July and August of 2010, HRT electronically submitted revised procedures for quarterly milestone reporting and updated procedures for federal financial reporting which addressed the Technical findings. Additionally in the same email sent in August 2010, HRT submitted a newly updated preventative maintenance plan which addressed the maintenance findings related to late preventative maintenance. Lastly, in the same correspondence in August 2010, HRT submitted a newly revised procurement procedures manual, which sufficiently addressed the findings in the area of Procurement.

In a letter dated October 20, 2010 the USDOT FTA stated that based on the corrections made that all the findings from the HRT Triennial review were now considered closed.

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## **4 SERVICE EXPANSION PROJECT DESCRIPTIONS**

### **4.1 Introduction**

This chapter of the TDP describes service expansion projects that could be implemented over the six-year time frame of the TDP if sufficient funding is available. Chapter 3 included a route-by-route analysis of the existing system and listed a number of route changes derived from one of three sources:

- Service Efficiency Study (2010/2011)
- Comprehensive Operations Analysis (2009)
- Review and evaluation completed during the TDP

Any recommendations from Chapter 3 that would increase operating costs or would require new capital expenditures are repeated here and carried forward into the operations and financial analysis in this and the following chapters. In addition, some new services not listed in Chapter 3 are described below.

In the Appendix at the end of this Chapter, Table A-1 summarizes all of the constrained capital costs discussed in this chapter, and Table A-2 describes the service increase recommendations, both funded and unfunded.

### **4.2 Impetus for Recommendations**

The recommendations in this chapter stem from the demographic and land use and service analyses conducted in Chapter 3. They consider the current population and employment centers in the region as well as new growth areas anticipated to experience change in the short-term. Finally, the recommendations consider the Hampton Roads Regional Transit Vision Plan, to the extent practical in a fiscally constrained plan. The spread out nature of the HRT service area does present a challenge for providing efficient and cost effective transit service, so these recommendations are focused on not only improving operations but also adding service and revising service to key destinations with high population and employment densities

HRT has set one of its objectives as providing “a high quality service through increased service frequency, reliability, and service that addresses multiple trip purposes.” To that end, the service increases recommended focus on connecting areas with a mix of uses, including residential, employment, and shopping and entertainment destinations. In addition, as much as reasonable within a fiscally constrained and fiscally responsible plan, recommendations have been made to provide service with greater frequency so as to make the service more attractive and make transit a viable option, particularly in the more dense corridors and activity centers.

### 4.3 Funding

All bus service operations listed here are anticipated to be funded by fare revenue, advertising revenue, other revenue, CMAQ operating assistance for the first several years, grant revenue, federal formula funding (preventive maintenance and capital cost of contracting), and state operating assistance. The difference between the cost of operations and these other funding sources are anticipated to be paid with local subsidies provided by the six cities in which HRT operates.

### 4.4 Bus Service Increases on Existing Routes and New Routes – CONSTRAINED AND UNCONSTRAINED

This section describes recommended changes to existing routes, recommended new routes, and modifications to the original recommendations in the Service Efficiency Study. Because of the Cost Allocation Agreement, the savings would be reinvested by city; for example, the savings from Route 36 would go toward other Virginia Beach Service. An operating plan that shows the cost increases and reductions for the Service Efficiency Study recommendations, Chapter 3 recommendations, and the recommendations below is provided in Chapter 5. HRT is actively planning for the Service Efficiency changes to be implemented in FY 2012. The plan and analysis presented in the TDP is designed to provide additional information for HRT when making these changes, but due to timing and the planning process already underway, in addition to information that will be received from member cities, all changes listed here may not be possible to implement, as discussed below. This document serves as a planning tool and will be used to reference recommended changes.

Based on analysis completed in the Operating Plan (Chapter 5), each route recommendation below is denoted as either “Included in Cost Constrained Plan” or “Not Included in Cost Constrained Plan;” the routes marked “Included” could be funded using cost reductions that will be realized in January 2012 with the implementation of the Service Efficiency Study cuts. The designation “partially funded” indicates that a portion of the recommendation can be funded with existing revenue but not the entire recommendation, e.g., service can be added at a lower frequency than recommended, with the increased frequency to be added later. Please note that the operating expenses shown reflect FY 12 costs.

The change in annual operating cost and number of peak vehicles for each recommendation below are noted in *italics* following each route description. In addition, Table A-2 in the Appendix contains the details behind each recommendation, including current and projected levels of service, peak vehicles, revenue hours, and operating costs.

#### ***Route 1 – Included in Cost Constrained Plan***

The Route 1 serves a number of key locations and population and employment centers, including downtown Norfolk, Wards Corner, several hospitals, shopping centers, and the Virginia Beach Town

Center. It also travels through dense residential neighborhoods and mixed use residential areas; because it serves so many more densely populated areas and sees good ridership numbers, increased frequency is recommended. In addition, the very long route has trouble maintaining reliability.

The Service Efficiency Study recommends that 15-minute headways be provided between downtown Norfolk and Granby Street at Ocean View Avenue for the peak and midday periods. Currently, 15-minute headways only extend as far north as Granby at Little Creek Road and only during peak periods. Under the TDP plan, as discussed in Chapter 3, the eastern terminus of the route will be at Pleasure House Road and Shore Drive (Figure 4.1). During the daytime, buses would run every 30 minutes between Granby/Ocean View and Pleasure House/Shore. In the evening (after 6:00 p.m.) and on Saturdays, buses would run every 30 minutes between downtown Norfolk and Granby/Ocean View and every hour beyond that point. On Sundays, the entire route would run hourly. The cycle time for the full route is approximately 150 minutes (130 minutes of running time), and thus hourly service would require either three buses or another route with which to be interlined. *(+\$750,081 annual operating cost increase, +2 peak vehicles, for Route 1 and Route 36 combined, no capital cost because of vehicle savings of other route recommendations)*

**Figure 4.1 Route 1 Modifications**



***Route 12 – Included in Cost Constrained Plan***

The span of service on this route will be extended to 10:45 p.m. to better serve the Tidewater Community College facility. *(+\$175,630 annual operating cost, no capital cost)*

***Route 14 – Included in Cost Constrained Plan***

The span of service on this route will be extended to 10:45 p.m. to better serve the Tidewater Community College Chesapeake facility. *(+\$136,615 annual operating cost, no capital cost)*

***Routes 8 and 15 – Included in Cost Constrained Plan***

Route 15 currently runs every 30 minutes between Naval Station Norfolk and Military Highway The Tide Station and has some of the highest ridership and loads in the HRT system.<sup>1</sup> It connects key trip generators, including the Naval Station Norfolk, several colleges, many shopping destinations, and several employment locations; the majority of the route runs through office and commercial designated areas. The ends of the routes consist of two high employment locations, the Naval Station Norfolk and the Greenbrier Mall and several business parks in Chesapeake. En route, it traverses through relatively dense residential areas.

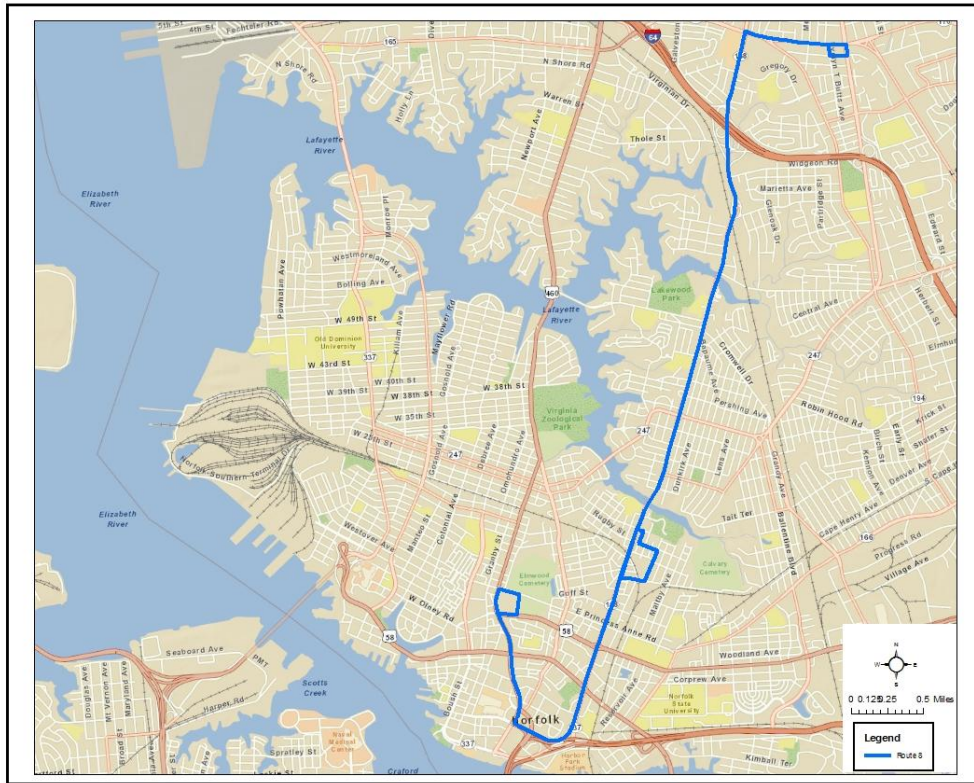
The Service Efficiency Study recommends that 15-minute headways be provided all day on weekdays on this route. The TDP recommends that 15 minute service be provided on this route between the Military Highway LRT station and the Evelyn T. Butts transfer center. Half of the trips would terminate at The Tide station, while the trips that continue south would alternate between Robert Hall Boulevard Shopping Center and Greenbrier Mall, each operating at 60 minutes. The northwestern segment of Route 15 (beyond Evelyn T. Butts) and the northeastern segment of the Route 8 would become the new Route 21 (Figures 4.2, 4.3, and 4.4). The round-trip running time from Evelyn T. Butts to each of the two shopping centers is about 113 minutes. This service could be operated with nine buses and a cycle time of 135 minutes. The current peak bus requirement for the route (as of August 2011) is 13 buses, but that is for the much longer route to the Naval Station Norfolk. *(+\$276,275 annual operating cost increase, no change in peak vehicles, for Routes 15, 8, and 21 combined, no capital cost)*

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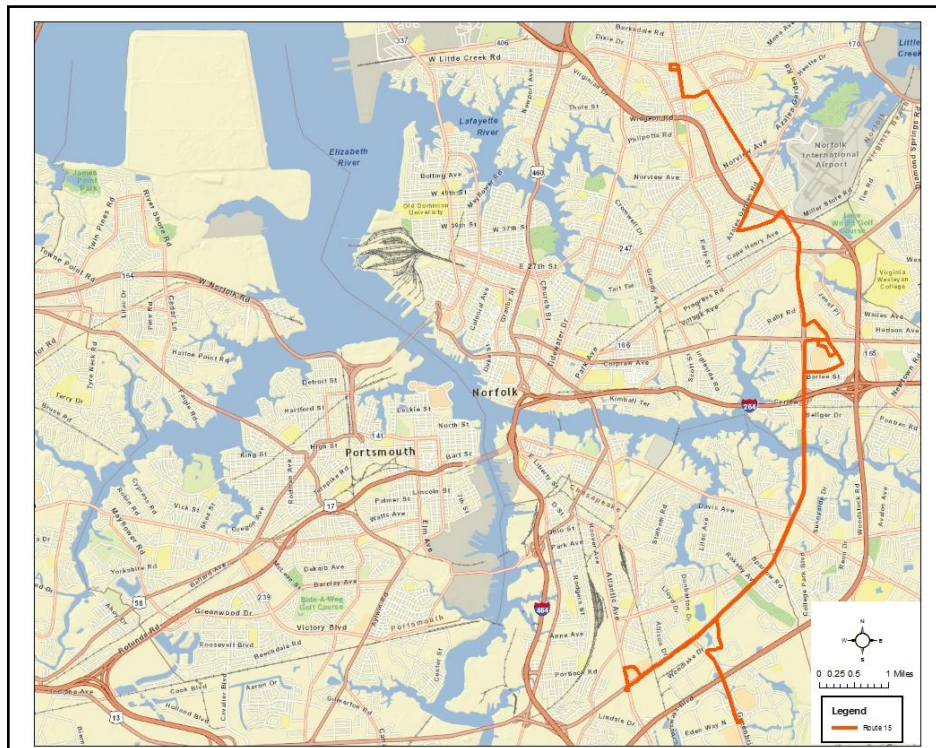
<sup>1</sup> This route currently has some short line trips (between Little Creek/Granby and Military Circle) to create 15-minute service during the peak periods. These short-line trips are to be cut in January as part of the Service Efficiency Study changes, with the exception of northbound trips in the afternoon.



**Figure 4.2 Route 8 Modification**



**Figure 4.3 Route 15 Modification**



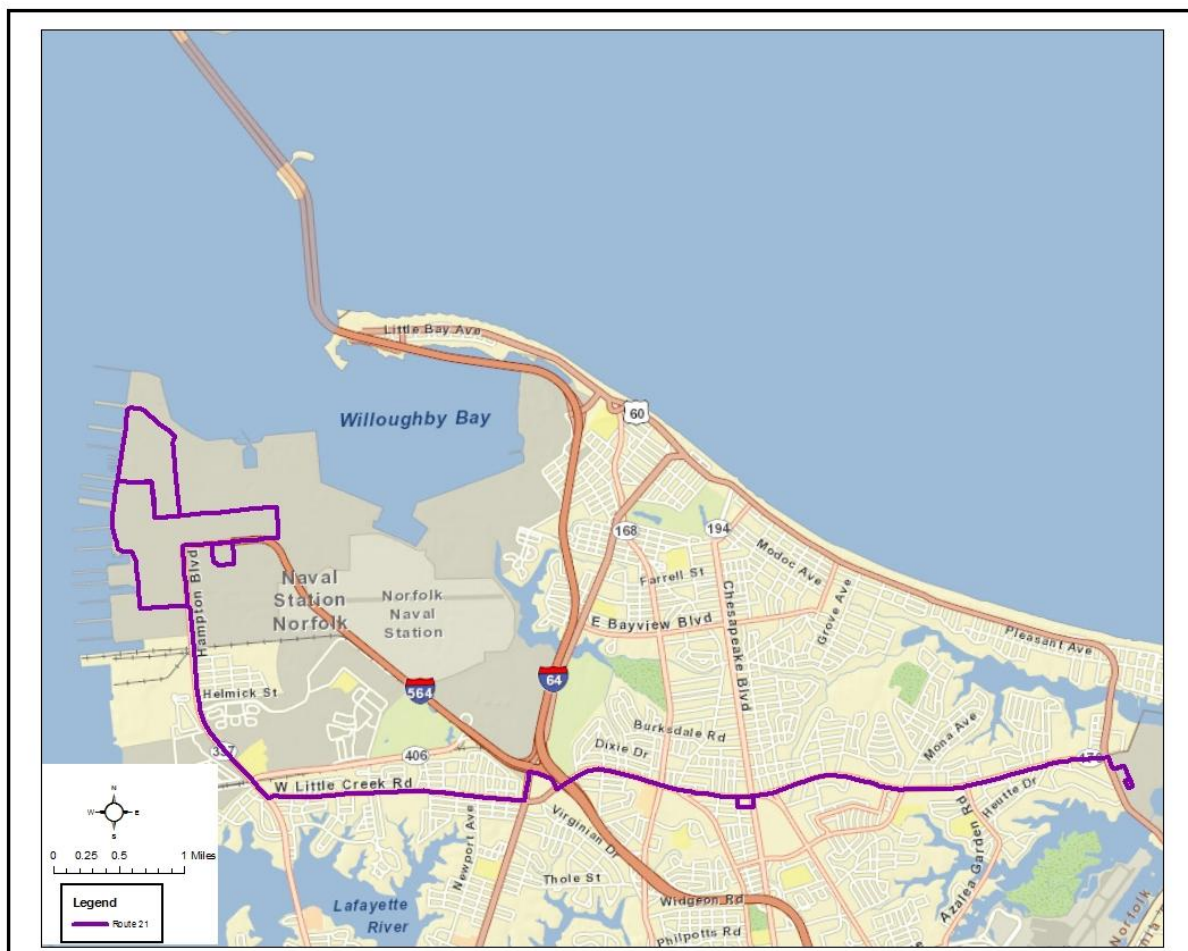


***Route 21 – New – Included in Cost Constrained Plan***

This route would be the first direct connection between the Norfolk Naval Station and the Amphibious Base, allowing for travel between the two locations by employees but also serving the employment, shopping and services along Little Creek Road east of Tidewater Drive and the residential areas to the west, including the Ward's Corner area.

This new route (see Figure 4.4) would cover the existing portion of Route 15 north and west of Evelyn T. Butts transfer center and the portion of Route 8 east of the transfer center. By doing so, it would offer a new direct connection between the Norfolk Naval Station and the Amphibious Base, also serving trip generators in between. The running time each way would be roughly 48 minutes, based on current schedules. Service every half hour would require four buses in service. (See Route 15)

**Figure 4.4 New Route 21**

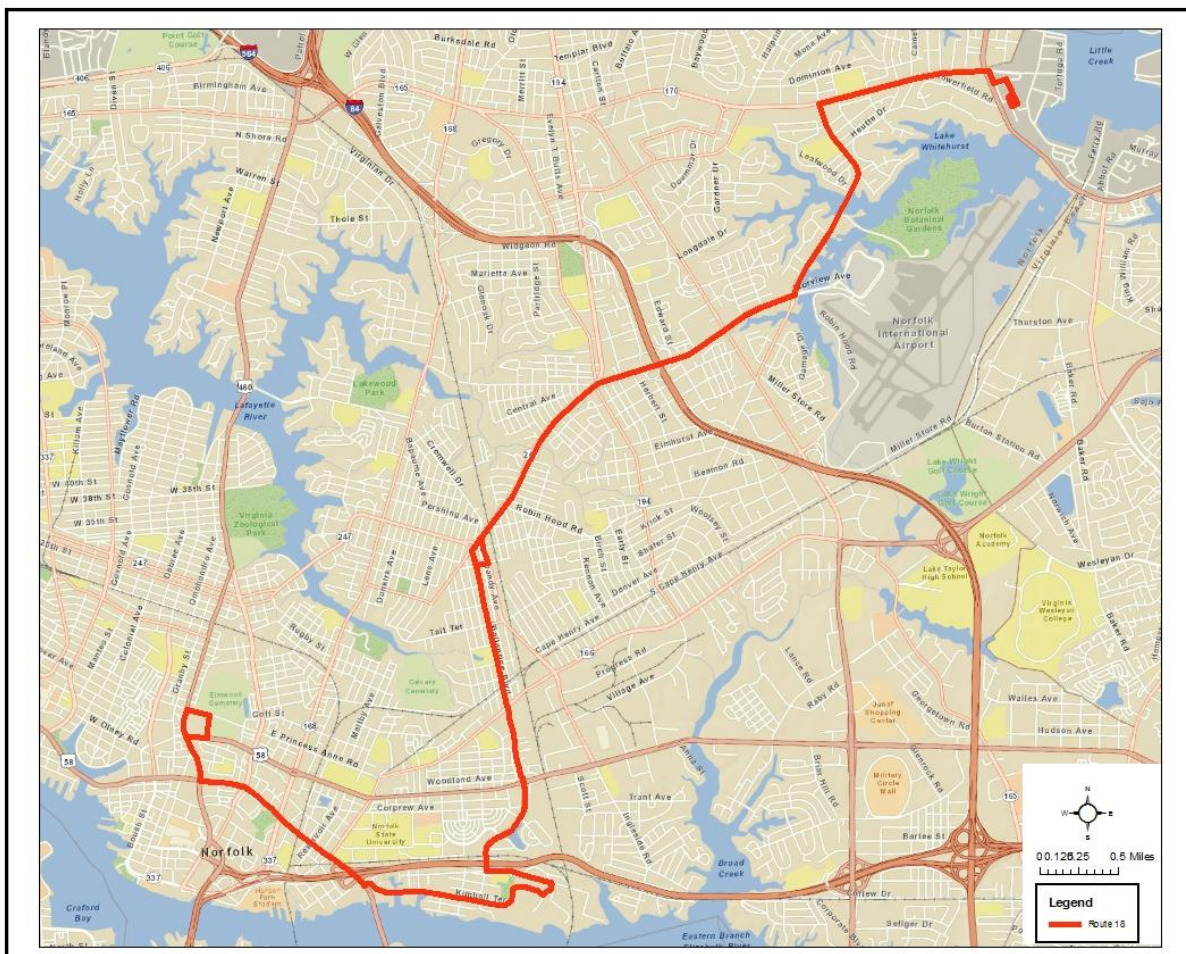


**Route 18 – Included in Cost Constrained Plan**

This route is a poor performer mainly because it serves only one large trip generator—downtown Norfolk—but does it rather indirectly. Extending this route to the north and east would increase access to new trip generators, including the Little Creek East Shopping Center, Norfolk International Airport, and the Amphibious Base.

From its current terminus on Ballentine Boulevard at Chesapeake Boulevard, the revised route (see Figure 4.5) would continue north on Chesapeake to Norview Avenue to Azalea Garden Road. At Little Creek Road, the route would head east, terminating at the Amphibious Base. The cycle time of the route would increase from the current 60 minutes to approximately 120 minutes (estimated 52 minutes running time each way). Service would operate hourly, requiring two buses compared to the one bus now used on the route. *(+\$254,651 annual operating cost increase, +1 peak vehicle, no capital cost because of vehicle savings of other route recommendations)*

**Figure 4.5 Modification to Route 18**



***Route 20 - Improvements – Included in Cost Constrained Plan***

The Route 20 is a long route that serves key employment locations in Norfolk, the Virginia Beach Town Center, and the Virginia Beach oceanfront. Providing better service along this heavily used and long route will help support the transit oriented development goals of the Virginia Beach Town Center and future development near the oceanfront.

The Service Efficiency Study recommended that headways on Saturday and Sunday be improved to 30 minutes at all times for the full length of the route from downtown Norfolk to Pacific/19<sup>th</sup> Street. The TDP endorses the improvement on Saturdays, but recommends that Sunday service remain at 60 minutes. In addition, the TDP recommends operating the short turn pattern of the route between Cedar Grove and Pembroke East through the midday period on weekdays so that this inner segment has 15-minute service throughout the daytime period. The TDP also recommends eliminating the segment on Pacific Avenue north of 19<sup>th</sup> Street. *(-\$49,582 net annual operating cost savings, saves one peak vehicle, no capital cost)*

***Route 20L - Limited Stop Overlay – Not Included in Cost Constrained Plan***

A limited-stop overlay route is proposed for this corridor due to the very long travel times (nearly 100 minutes end to end). It is proposed that this overlay service run every 30 minutes on weekdays, offset from the current trips that run all the way to Pacific/19<sup>th</sup>, so that the outer portion of the corridor would effectively have a 15-minute headway at those limited stops served by the new route, and the inner portion would have six trips per hour during peak periods. Based on experience of other limited-stop services, it should be feasible to drop the one-way running time from 95 minutes (average) to approximately 82 minutes. With a 180-minute cycle, six buses would be required for this service. The limited-stop Route 20 should be operated from 6:00 a.m. to 6:00 p.m. *(+\$1,405,182 annual operating cost, +6 peak vehicles, no capital cost for funded portion of improvement because of vehicle savings of other route recommendations)*

***Route 23- 15 Peak period Service- Included in Cost Constrained Plan***

This will include 15 minute hour service on Route 23. The Route 23 connects two The Tide stations and provides transfers at Cedar Grove. It also serves two hospitals and operates through high density population and employment areas. The route enjoys relatively high productivity, and therefore would benefit from increased service of 15 minute headways during the peak periods. *(+\$251,556 annual operating cost, +4 peak vehicles, no capital cost because of vehicle savings of other route recommendations)*

***Route 24 – New – Not Included in Cost Constrained Plan***

The new Route 24 (see Figure 4.6) would provide service between two dense commercial and Strategic Growth areas, around Lynnhaven Mall and the Pembroke Mall and Virginia Beach Town Center areas. This would help support the transit-oriented goals for the Town Center.

The COA recommended that Route 26 be changed to run north on Rosemont Road to Pembroke East rather than south to Tidewater Community College (TCC), but with the truncation of Route 29 at



Lynnhaven Mall, this change is no longer feasible. Instead, this new route is proposed to serve this area, running from Lynnhaven Mall west on Bow Creek Boulevard to Rosemont Road, north to Bonney Road, west to Constitution Drive and north to Pembroke East. The one-way running time for this route should be about 25 minutes, so that one bus would be able to operate an hourly headway reliably. Service should operate Monday through Saturday from 6:30 a.m. to 7:00 p.m. (*+\$310,874 annual operating cost increase, +1 peak vehicle*)

**Figure 4.6 New Route 24**



**Route 25 – Included in Cost Constrained Plan**

The span of service on this route will be extended to 10:45 p.m. to better serve the Tidewater Community College facility. This route was recently extended to the Virginia Beach Municipal Complex. (*+\$31,319 operating cost, no capital cost*)

**Route 27 – Included in Cost Constrained Plan**

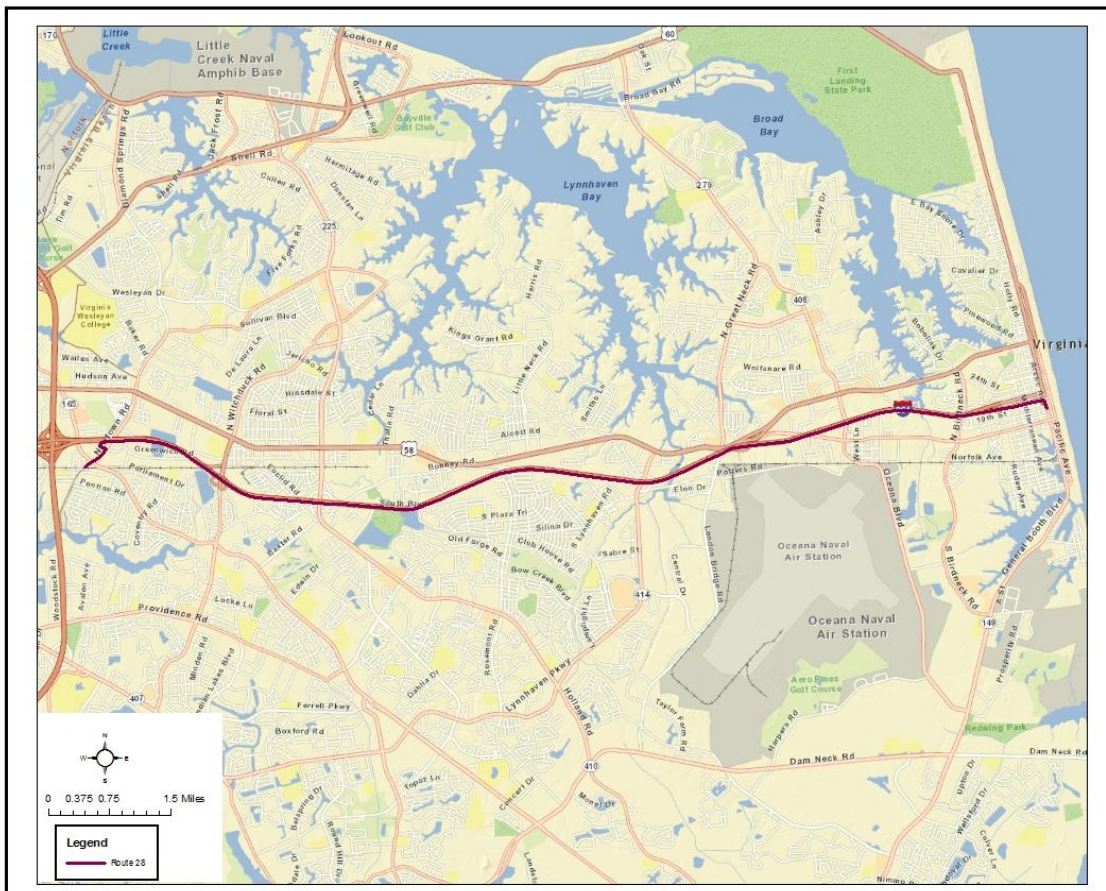
The span of service on this route will be extended to 10:45 p.m. to match the service span of the Tide. (*+\$23,913 operating cost, no capital cost*)

**Route 28 – New – Not Included in Cost Constrained Plan**

This route (see Figure 4.7) would provide a higher speed connection between the dense and continuing to develop Virginia Beach oceanfront and Norfolk by connecting to the east end of The Tide light rail line. The purpose of this route would be to encourage transit ridership and build a market for the future rail extension, setting the stage for transit use and denser development along this corridor, which passes through six of Virginia Beach's eight Strategic Growth Areas.

This route was proposed as part of the Tide Feeder Plan and endorsed by the TDP. This route would connect the end of the Tide LRT at Newtown Road with the Virginia Beach oceanfront via I-264. While the extension of the Tide to the oceanfront undergoes continued study, the concept of this route would be to build the ridership market for the future rail extension. It would not serve intermediate locations, but rather provide an express connection from the rail station to the transfer center at 19<sup>th</sup> Street and Pacific Avenue. (+\$1,338,765 operating cost, +3 peak vehicles)

**Figure 4.7 New Route 28**



***Route 30 (VB Wave) – Not Included in Cost Constrained Plan***

All year operation of the Route 30, currently operated very successfully during the tourist season, would help support development at Virginia Beach's Strategic Growth Area at the oceanfront.

It is proposed that it operate year round to serve residents, employees, and visitors, and also to make up for the elimination of Route 20 service along Pacific Avenue. The route would operate with a headway of 30 minutes during the off season. It currently operates every 10-15 minutes during the tourist season for most of the day, with a peak bus requirement of seven, but operates every five minutes in the evening with a peak requirement of 12; the route's cycle time is 60 minutes. During the off season, travel times are shorter, so that no more than two buses would be needed to operate a 30-minute headway reliably. *(+\$660,781 operating cost, +2 peak vehicles)*

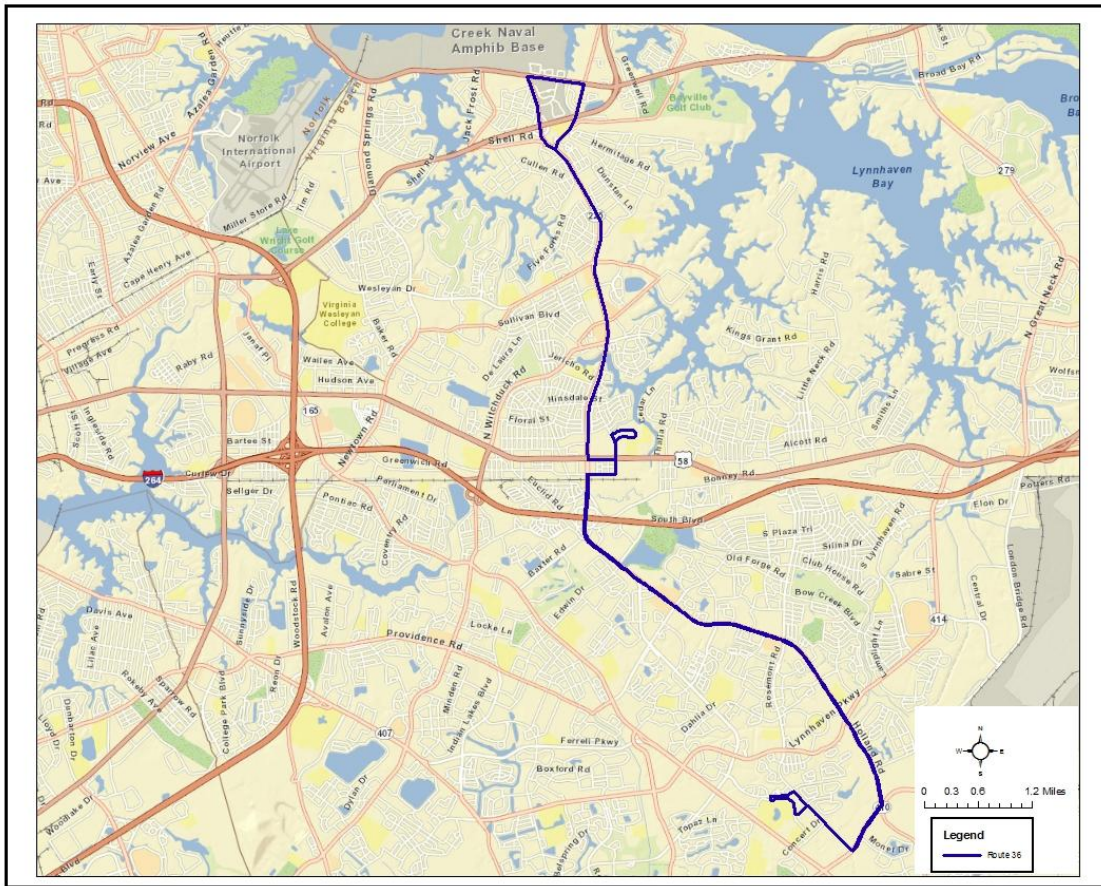
***Route 36 – Included in Cost Constrained Plan***

The Route 36, as redefined (see Figure 4.8), will serve the commercial area at Pleasure House Road/Shore Drive and the mixed commercial and residential areas south toward Tidewater Community College, through the Rosemont Strategic Growth Area.

A number of changes are proposed for this route. As part of an adjusted COA recommendation to split Route 1, Route 36 would be extended north from Pembroke East to Pleasure House/Shore Drive along Independence Boulevard. It would thus operate from Pleasure House/Shore Drive to Virginia Beach Tidewater Community College (TCC) campus. In addition, the Service Efficiency Study recommended that the peak headway on this route be improved from 60 minutes to 30 minutes, which the TDP endorses. A possible southerly extension to the Virginia Beach Municipal Complex should be revisited once the connection on Nimmo Parkway is extended to General Booth Boulevard and Holland Road is widened. The estimated running time between Pleasure House/Shore Drive and TCC is about 55 minutes; four buses would be needed for a 30-minute peak headway. *(For route split changes, See Route 1. For modification to the Service Efficiency Study Recommendations, -\$155,462 annual operating cost, no change in peak vehicles.)*



**Figure 4.8 Route 36 Modifications**



***Route 38 – Not Included in Cost Constrained Plan***

This route will provide peak period service to the Oceana Naval Air Station and the Dam Neck corridor. An exact alignment has not yet been developed. (+466,543 operating cost, +4 peak vehicles)

***Route 45 – Not Included in Cost Constrained Plan***

Route 45 connects several densely developed areas, including Victory Crossing, the relatively dense residential areas along Portsmouth Boulevard, downtown Portsmouth (with a connection to the Paddlewheel Ferry), and into downtown Norfolk. The route supports Portsmouth's goal to grow and diversify land uses in the city's activity centers, including both Victory Crossing and downtown.

The Service Efficiency Study recommended that for a nine-hour period on weekdays during the daytime, that headways be improved from 30 minutes to 15 minutes. The TDP recommends that the 15-minute service be operated during peak periods only, from 6:00 a.m. to 9:00 a.m. and 3:00 p.m. to 6:00 p.m. The current peak requirement is four buses; this would rise to eight with the service increase, though there appears to be some slack time in the schedule, so it may be possible to operate a 15-minute headway with seven buses. Ridership on this route is strong throughout the day and it is the primary bus connection between Portsmouth and downtown Norfolk. (+\$267,306 annual operating increase, +3

*peak vehicles, no capital cost for funded portion of improvement because of vehicle savings of other route recommendations)*

***Route 47 – Not Included in Cost Constrained Plan***

Route 47 serves the relatively low density residential areas in the northern and western portions of Portsmouth, however it is the only service to that area. Service currently ends service at 7:30 p.m. on weekdays and Saturdays, with the last inbound trip departing from Village Street at Academy Avenue at 7:02. The TDP recommends that the span of service on this route be extended until 10:00 p.m., as it is the only route available in the northern and western portions of Portsmouth. It is recommended that the bus that arrives at County/Court at 7:00 p.m. continue in service for another three hours on weekdays and Saturdays, providing an hourly headway until 10:00 p.m. (*+\$71,740 annual operating increase, no capital cost*)

***Route 102 and 118 – Not Included in Cost Constrained Plan***

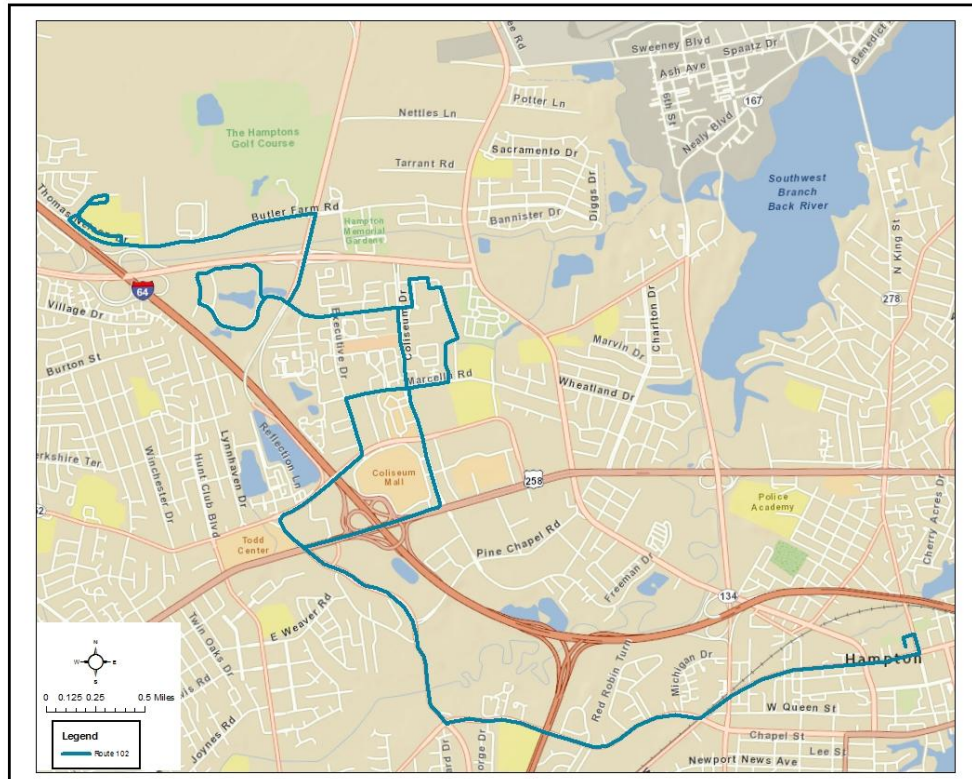
The Routes 102 and 118, as defined below and shown in Figures 4.9 and 4.10, serve a variety of high ridership generators and a wide variety of locations, including business parks, the Thomas Nelson Community College, and the mixed use Peninsula Town Center.

Route 102 is a relatively short route in Hampton that has relatively little unique mileage, overlapping with routes 110, 114, and 105 at various points. Route 118 is a longer route and quite circuitous, traveling west, east, and north of Tide Mill Farms, and including out and back segments to Thomas Nelson Community College, Langley Air Force Base Hospital and the Langley Research and Development Park. This recommendation restructures these two routes so that the 102 is extended and made more functional while the 118 is streamlined and made more direct. At the same time, the level of service on both routes is improved to provide 30-minute service during weekdays.

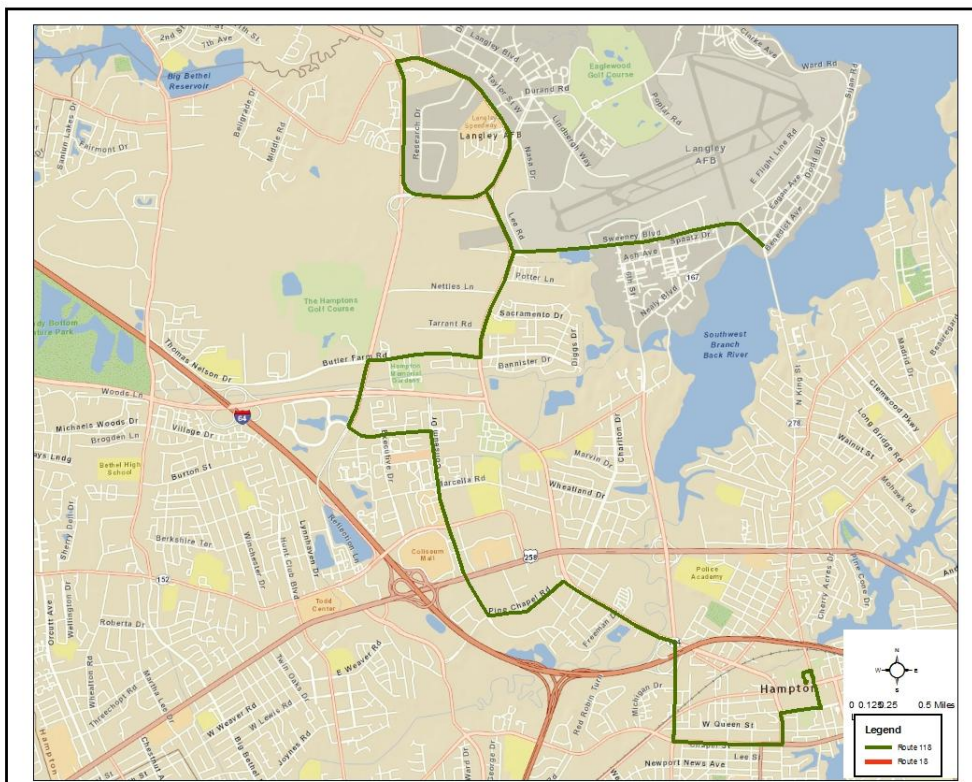
The 102 would be extended from the Sentara Careplex via the 118 alignment to Enterprise Parkway and Thomas Nelson Community College. Those segments would be removed from the 118, which would travel from the Careplex west on Hardy Cash Drive, north on Magruder and then east on Butler Farm Road to complete the rest of its alignment. The one-way running time on each route would be about 35 minutes, resulting in a cycle time of 90 minutes. During periods when these routes operate on an hourly headway (weekday and Saturday evenings, and all day on Sundays), they would be operated as an interlined pair with three buses on a 180-minute cycle. (*+\$712,774 operating cost, +3 peak vehicles, no capital cost because of vehicle savings of other route recommendations*)



**Figure 4.9 Modifications to Route 102**



**Figure 4.10 Modifications to Route 118**



***Route 106/107 – Partially Included in Cost Constrained Plan (FY2013)***

The Route 106 and 107 changes, as described below, would provide much more frequent service that is focused on the dense areas around the Patrick Henry Mall and Oyster Point mixed-use development, and serves the large employment centers off of J Clyde Morris Boulevard. A map of the recommended changes is located in Chapter 3.

The Service Efficiency Study recommended that the portions of these routes between downtown Newport News and Patrick Henry Mall be operated at a 15-minute headway during weekday peak periods. As of now, each route is operated at a 60-minute headway, with a combined bus requirement of six vehicles. The Newport News restructuring plan in Chapter 3 recommends that these routes be combined into a single route and that service north of Patrick Henry Mall be operated by other routes. At a 30-minute combined headway (equivalent to current service), the restructuring plan reduces the number of peak vehicles in service. A service increase on Warwick Blvd is justified by high ridership, however, and thus a 15-minute headway is recommended. Indeed, midday ridership is as strong as peak period ridership, and thus 15-minute headway from 6:00 a.m. through 7:00 p.m. is warranted, with a 30-minute headway for the early morning and evening service. The 15-minute headway would require eight buses in service.

It is important to note that while 15-minute peak headways are recommended, the Newport News Restructuring Plan is still feasible if the 106 operates on a 20-minute peak headway due to limited resources. *(+\$1,408,912 operating cost, 2 peak vehicles for entire Newport News Restructuring Plan: Routes 106, 107, 108, 112, 116, and 119; with 20-minute headway for Route 106, operating costs increase by \$511,157 with no change in peak vehicles, no capital cost)*

***Route 117 – Included in Cost Constrained Plan (FY2013)***

With the proposed elimination of Route 109, service can be increased on Route 117 with no additional cost, as those two routes are currently interlined. This would achieve the recommendation in the Service Efficiency Study to improve the headway from 60 minutes to 30 minutes. A single bus would provide all of the service on this short circulator route. *(+\$0 operating cost, no capital cost)*

***Route 119 – Included in Cost Constrained Plan (FY2013)***

The Newport News restructuring plan calls for a greatly increased role for Route 119, which currently has very poor ridership, operating between the Patrick Henry Mall, the low density office parks surrounding the Oyster Point development, and Oyster Point itself. The new 119 would continue south through more dense commercial development and to the Riverside Hospital and Christopher Newport University, both potentially large trip generators. A map of the recommended changes is located in Chapter 3.

In order to serve the segments of other routes that will be appended to the 119 (part of Route 112 and Route 107), the span of service on the 119 will have to be increased to include Saturday and Sunday for the same hours as the 112 and 107. The peak bus requirement will not change, as the 119 will change

from one to two buses, but the Route 112 requirement would drop from five to four. (*See Route 106/107.*)

#### **4.5 Capital Improvements – CONSTRAINED**

This section describes the capital improvements that HRT plans to make over the six-year TDP timeframe, including passenger facilities, fleet, and other capital needs such as technology and maintenance equipment. Costs by year for each improvement and program are shown in this section. Table A4-1 in the chapter appendix summarizes the costs and funding sources that have been identified for each funded item. All costs are shown in FY2012 dollars; the costs using year of expenditure (YOE) dollars are shown in Chapter 7, the Financial Plan.

##### ***Passenger Facility Improvements***

Further upgrades and improvements to other transfer centers and locations are needed. The terminology referring to the different levels of service and passenger amenities at transfer opportunities is described in Chapter 3 of the TDP.

##### Military Circle Mall

\$800,000 has been budgeted in the HRT capital plans to upgrade the transfer center site located within the Military Circle Mall, however the mall owners may not grant approval. This may require HRT to relocate this transfer center. Preliminary investigations to identify alternate sites have been initiated. One potential location would move the transfer center north of the mall to a site near the Walmart on North Military Highway at Lowery Street.

##### NET Center

\$175,000 has been allocated from the capital program to repave the busway at the NET Center transfer center in Newport News.

##### Patrick Henry Mall Transfer Center

A transfer center with five shelters is currently under construction at Patrick Henry Mall and is scheduled to be completed by the end of 2011. It is estimated to cost approximately \$650,000 and is funded by previous prior year CMAQ allocations.

##### Hampton and Newport News Transfer Centers Upgrades

Improvements to the transfer centers in Hampton and Newport News have been funded with \$1,444,000 in American Recovery and Reinvestment Act (ARRA) funding. The improvements to the transfer centers include updated restroom facilities and passenger waiting areas. These improvements will be completed in 2011.

A summary of HRT's new transfer centers and improvements to existing transit and transfer centers that are expected to be completed within the TDP timeframe are shown in Table 4.1. In addition to the

specific transfer center and passenger facility improvements, \$3.5 million in RSTP funding has been allocated for general improvements to all HRT facilities.

**Table 4.1 HRT Funded Passenger Facility Improvements**

	Funding Source	FY12	FY13	FY14	FY15	FY16	FY17
Military Circle Mall*	Federal Formula	\$200,000	\$600,000	-	-	-	-
NET Center	Federal Formula	\$175,000	-	-	-	-	-
Patrick Henry Mall	CMAQ	\$650,000	-	-	-	-	-
Hampton Transit Center and Newport News Transfer Centers	ARRA	\$1,444,000	-	-	-	-	-
General Facility Upgrades	RSTP		\$116,925	\$3,383,075			
<b>Total Cost</b>		<b>\$2,469,000</b>	<b>\$716,925</b>	<b>\$3,383,075</b>	<b>-</b>	<b>-</b>	<b>-</b>

\* This funding may be utilized for another transfer center, if mall management does not support the improvements.

### ***Bus Shelter Program***

HRT currently has almost 200 bus shelters located at transit and transfer centers, locations and points, and at 101 bus stops. In addition, the Navy has installed ten shelters at bus stops within the Norfolk Navy Station. Most of these shelters are reported to be in at least fair or better condition.

HRT has prepared a passenger shelter program to add units to bus stops and to replace damaged and missing shelters as well as those judged to be in poor condition. The current estimate for purchase and installation of a new shelter is \$8,000. Funding has been identified from several federal programs including CMAQ, RSTP and Job Access Reverse Commute (JARC) allocations. As shown in Table 4.2, much of the funding is currently available, as it has been previously allocated; as noted in the table, the CMAQ and RSTP funds have been flexed by several of the member cities, while JARC funding has been awarded directly to HRT. HRT has also allocated the majority of its enhancement funds over the next six-years to provide additional shelters; for this TDP, it is assumed that all of the enhancement money available will be spent on shelters (although in fact a small portion may be reallocated to resigning bus stops). In all cases, HRT will work cooperatively with local officials to determine the final shelter placements within the sponsoring cities. HRT has proposed the following order to decide general placement of new shelters:

- Use CMAQ and RSTP funds to install approximately 138 shelters at high activity stops including new and replacement locations within the sponsoring cities.
- Identify high activity bus stops currently without shelters that meet JARC program criteria to serve work-related trips taken by low-income residents and install 42 shelters.

- Install 192 new or replacement shelters at other systemwide locations with high activity using enhancement funds.

**Table 4.2 HRT Passenger Shelter Program Summary (At Bus Stops and Transfer Stops)**

Location	Funding Source	FY12	FY13	FY14	FY15	FY16	FY17	Total Shelters
Chesapeake	CMAQ **	\$150,000	-	-	-	-	-	18
Newport News	CMAQ	\$312,400	\$320,000	-	-	-	-	79
Newport News	RSTP	\$235,237	-	-	-	-	-	29
Virginia Beach	CMAQ**	\$100,000	-	-	-	-	-	12
Systemwide*	JARC**	-	\$342,250	-	-	-	-	42
Systemwide	Enhancement	\$238,560	\$246,421	\$243,580	\$262,341	\$271,282	\$278,418	192
<b>Total Cost</b>		\$1,036,197	\$906,421	\$243,580	\$262,341	\$271,282	\$278,418	\$2,998,240
<b>Number of Shelters</b>		129	113	30	32	33	34	372

\*Placement of shelters must meet JARC criteria to serve residents of low-income areas primarily for work and work-related travel, including reverse commute services.

\*\* FY2011 allocation

### ***Bus Stop Sign Program***

HRT is in the process of having new bus stop signs manufactured and installed at all 3,500 bus stops in the system. The sign program will be funded mostly with \$2,138,199 in RSTP funding that has been allocated across FY2011, FY2012, and FY2013; it is anticipated that those funds would be expended one year following each allocation, i.e., in FY2012 through FY 2014. While there may be some enhancement funding from HRT to supplement the RSTP funds, for the TDP financial plan it is assumed that all of the enhancement money will be used for bus shelters; however the agency is likely to reprogram some of the funds for the bus stop sign program to supplement the RSTP funding.

### ***Southside Maintenance and Administration Facility***

The first phase of this operations complex, a 200,000 square foot bus maintenance facility, opened in June 2011 at a total cost of \$57 million. The adjacent 44,000 square foot administration building is expected to be completed in 2012 with expenses paid during FY2012 year totaling \$12.9 million.

### ***Vehicle Replacement and Expansion***

#### **Full Size Bus Replacement**

Chapter 3 presents HRT's bus fleet replacement plan: over the six year period the agency plans to purchase 105 new buses, 29 29-foot, 14 35-foot and 62 40-foot type heavy duty transit buses. In addition, over this period HRT intends to reduce the total fleet size from 302 to 264 vehicles. HRT has programmed \$44.26 million distributed over the six years as shown in Table 4.3. Some of this funding is anticipated to be sourced from a VDOT State of Good Repair Grant for 10 29-foot buses (\$4,058,600)

and 20 35-foot buses (\$8,364,100). Those buses include pre-wire for Trapeze ITS (Automatic Vehicle Location) hardware and software.

**Table 4.3 Bus Replacement Program**

	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	Total
<b>29 – Foot Buses</b>							
<b>#of Buses</b>	0	0	4	0	12	13	29
<b>Cost</b>	-	-	\$1,570,588	-	\$4,902,119	\$5,416,841	\$11,889,548
<b>35/40 – Foot Buses</b>							
<b># of Buses</b>	9	5	20	23	12	7	76
<b>Cost</b>	\$3,488,400	\$1,976,760	\$8,489,664	\$9,958,376	\$5,299,588	\$3,153,255	\$32,366,042
<b>Total Buses</b>	9	5	24	23	24	20	105
<b>Total Cost</b>	\$3,488,400	\$1,976,760	\$10,060,252	\$9,958,376	\$10,201,707	\$8,570,096	\$44,255,590

HRT plans to acquire 35' buses in FY2012 & FY2013 with 40' buses to be acquired during the last four years.

#### Passenger Vans: Vanpool Replacement and Expansion Program

Over the six-year period from FY2012 through FY2017, HRT plans to purchase 68 passenger vans for its Traffix vanpool program, 16 for expansion and 52 to replace vans to be retired. Half of the expansion vans will be purchased in FY2013 and the other half in FY2015 (three 7-passenger, three 12-passenger, and two 15-passenger vans each year) with the remaining vans as replacements. HRT has allocated \$1.71 million for the van program expansion and vehicle replacement as presented in Table 4.4.

**Table 4.4 Vanpool Program Fleet Replacement and Expansion**

	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	Total
<b>7 - Passenger Van</b>							
<b># of Vans</b>	0	3	0	3	5	5	16
<b>Cost</b>	-	\$67,106	-	\$69,817	\$118,689	\$121,062	\$376,674
<b>12 - Passenger Van</b>							
<b># of Vans</b>	0	3	0	3	5	4	15
<b>Cost</b>	-	\$72,568	-	\$75,500	\$128,349	\$104,733	\$381,150
<b>15 - Passenger Van</b>							
<b># of Vans</b>	6	12	11	8	0	0	37
<b>Cost</b>	\$153,000	\$312,120	\$291,832	\$216,487	-	-	\$973,439
<b>Total Vans</b>	6	18	11	14	10	9	68
<b>Total Cost</b>	\$153,000	\$451,794	\$291,832	\$361,804	\$247,038	\$225,795	\$1,731,263

#### Ferry Replacement

\$2 million is programmed in FY2014 and again in FY 2017 to replace two paddleboat ferries. These vessels exceed 30 years of age and extensive rehabilitation or replacement is overdue.



#### Paratransit Vehicle Replacement Program

HRT owns 33 Ford StarTrans 2007 model small buses which are provided to their paratransit service operating contractor who leases 54 additional vehicles to serve HRT. HRT is evaluating other paratransit service models as well as alternatives to leased vehicles. FTA has identified five years as the minimum life span for these small vehicles. Depending upon actual mileage, the industry typically maintains paratransit vehicles in service for six to seven years. HRT is preparing a replacement program and is completing a State-of-Good-Repair grant to fund the replacement of the 33 owned vehicles no later than early FY2015. The cost of a new vehicle is estimated at \$80,000 each for a total replacement plan cost of \$2.48 million.

#### ***The Tide Light Rail Vehicle, Track, and Technology Upgrades***

The new The Tide light rail service began service during FY2012 (August 2011). HRT prepared a list of “LRT Capital Improvement Projects,” specifically to: provide certain maintenance equipment (e.g., wheel truing machine); program vehicle, track, traction power, and signal maintenance; and maintain of Supervisory Control and Data Acquisition (SCADA) components and systems to maintain service reliability. Funding to support the infrastructure and vehicles components for The Tide operation is summarized in Table 4.5.

**Table 4.5 The Tide Maintenance and Rehabilitation**

	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	Total
<b>Vehicle Maintenance</b>							
<b>Cost</b>	-	\$2,143,620	\$637,100	\$1,240,540	\$832,500	-	\$4,853,760
<b>Infrastructure Maintenance (Track, Traction Power, Signals, SCADA)</b>							
<b>Cost</b>	-	-	\$35,000	\$49,360	\$974,610	\$820,760	\$1,879,730
<b>Total Cost</b>	-	\$2,143,620	\$672,100	\$1,289,900	\$1,807,110	\$820,760	\$6,733,490

#### ***Technology Systems Acquisition and Upgrades***

Several legacy computer systems need upgrade to maintain reliability, acquire current features and to support new applications. In addition, computer hardware is required to replace outdated equipment to support current software specifications. Table 4.6 provides a summary of the proposed technology budget.

**Table 4.6 Technology Systems**

	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	Total
<b>PeopleSoft HRMS</b>	\$150,000	\$312,000	-	-	-	-	\$462,000
<b>PeopleSoft Financial Sys.</b>	\$327,800	\$1,100,000	\$613,320	-	-	-	\$2,041,120
<b>Automated Bus Dispatch System</b>	-	\$500,000	\$500,000	\$500,000	\$500,000	-	\$2,000,000
<b>Hardware</b>	-	\$100,000	\$200,000	\$200,000	\$200,000	\$200,000	\$900,000
<b>Total Cost</b>	\$477,800	\$2,012,000	\$1,313,320	\$700,000	\$700,000	\$200,000	\$5,403,120

***Equipment Upgrade and Acquisition***

HRT has programmed capital funds to provide for the acquisition or upgrade of the equipment and systems shown in Table 4.7 to maintain and upgrade vehicles and system infrastructure.

**Table 4.7 Equipment Upgrade and Acquisition**

	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	Total
<b>Alignment Machine</b>	-	\$45,000	-	-	-	-	\$45,000
<b>Tire Pressure and Tread Depth System</b>	\$220,000	-	-	-	-	-	\$220,000
<b>Vehicle Brake System</b>	\$224,788	-	-	--	-	-	\$224,788
<b>EMS – Compliance</b>		\$175,000	\$175,000	\$175,000	\$175,000	\$175,000	\$875,000
<b>Solar Light Project</b>	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$150,000
<b>Radio Upgrade</b>	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$300,000
<b>Fare Collection Equipment</b>	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$1,500,000
<b>Safety and Security System Support</b>	\$238,560	\$246,421	\$243,580	\$262,341	\$271,282	\$278,417	\$1,540,603
<b>Total Cost</b>	\$1,008,348	\$791,421	\$743,580	\$762,341	\$771,282	\$778,418	\$4,365,603

***The Tide Light Rail Extension Studies***

HRT has identified funding for completion of an Alternatives Analysis (AA) for an extension of The Tide to the Norfolk Naval Base and potentially Old Dominion University, as well as for completion of the Virginia Beach Transit Extension Study AA, Supplemental Draft Environmental Impact Statement (DEIS), Final EIS, Preliminary Engineering (PE) and a portion of Final Design for the Virginia Beach extension. There has been \$29.0 million RSTP allocated for the extension studies in Norfolk and Virginia Beach through FY 2017. The City of Virginia Beach has also identified \$6.2 million in RSTP towards the Virginia Beach extension.



## **4.6 Capital Improvements – UNCONSTRAINED**

HRT has additional capital needs that are not currently funded in their six-year constrained budget. This section includes descriptions of each project and the estimated cost of each, and the total list of unfunded costs is shown in Appendix Table A-2.

### ***Passenger Facility Improvements***

HRT has identified needs to improve, replace or augment capital facilities throughout the service district. These needs are briefly described in the following section with costs summarized in Table 4.8. The total funding is estimated to cost in excess of seven million dollars. Currently, funding has not been programmed for these proposed projects.

#### Replacement of Cedar Grove Transfer Center

The current location of HRT's primary transfer in Norfolk is located on the edge of Downtown at the Cedar Grove Transfer Center. Because this area was only intended to be in service temporarily, a permanent location with closer access to downtown Norfolk is needed. A potential new transfer center closer to the downtown core is under study. The new location would bring the bus transfer center closer to the Monticello Avenue LRT Station, which is situated in the center of the Norfolk downtown area. HRT is coordinating with the City of Norfolk regarding the potential transfer center.

#### Ocean View Transfer Center Improvements

The existing transfer area in Ocean View is not in an ideal location to support the safety and security of waiting passengers, and is not easily accessible for bus traffic. This project would construct a bus transfer center and make other improvements to support HRT buses operating safely and efficiently through the center. The improvements would include designating a point of ingress, providing a specified route for bus travel through the center, constructing bus stops locations to safely pick up and drop off passengers, and defining a designated point of egress. These improvements have been estimated at \$650,000.

#### Evelyn Butts Transfer Center Improvements

The existing location is the second largest bus transfer center in Norfolk and currently does not support significant numbers of passengers waiting or the large number of buses lined up to pick up passengers. The design and construction of an upgraded transfer station is required. Work may include the addition of passenger amenities, concrete installation for waiting areas, sidewalks, drainage improvements, and landscape. If the existing property cannot support the expansion, additional property may be sought. These improvements have been estimated at \$1,000,000.

#### Town Center/Pembroke Mall Transfer Center Improvements

This transfer center is located at Constitution Drive and Corporation Lane in Virginia Beach. The project would erect a bus transfer station and make other improvements to support HRT buses operating safely

and efficiently through the center. The improvements would include designating a point of ingress, providing a specified route for bus travel through the center, constructing bus stops locations to safely pick up and drop off passengers, and defining a designated point of egress. These improvements have been estimated at \$750,000.

#### Reon Drive Transfer Center Improvements

Improvements planned at Reon Drive include the replacement of concrete paving, an upgrade of the subsurface drainage system and the installation of new bus shelters. This outdated facility no longer provides sufficient capacity for customer use at this transfer center located in Virginia Beach. These improvements have been estimated at \$350,000.

#### Pleasure House Transfer Center Area Improvements

This project is located at Pleasure House Road and Shore Drive in Virginia Beach. The current area needs to be updated to support improved and expanding services for the routes that transfer at this location. Concrete replacement at the shelter locations, drainage improvements and passenger amenities may be upgraded. These improvements have been estimated at \$250,000.

#### Pacific Avenue Transfer Area Improvements

This project is located at Pacific Avenue and 19th Street in Virginia Beach and would make necessary improvements to the existing bus transfer area location, including shelters, lighting, concrete repair/replacement, and drainage improvements. The current area needs to be upgraded to support improved and expanded services to aid the passengers that transfer at this location. These improvements have been estimated at \$550,000.

#### Victory Crossing Improvements

This project is located along Cavalier Boulevard between Victory Boulevard and Pocahontas Street in Portsmouth, VA, an area in the process of higher density redevelopment as a state designated Enterprise Zone and federally designated Hub-Zone. The Victory Crossing Transfer Station supports seven routes including the MAX. Currently there is no accessible parking near the station to support the needs of riders. The Victory Crossing shopping center and the site for the future expansion of the Tidewater Community College Portsmouth Campus are located adjacent to the transfer station. This project will consist of constructing a park and ride lot adjacent to the new Victory Crossing Transfer Station which was constructed in 2010 as the second phase of the Victory Crossing Transfer Station project. In addition, this project will include concrete paving, drainage improvements, and landscaping. The improved transfer station will support the active redevelopment of the city's Victory Village Project. These improvements have been estimated at \$500,000.

#### Concrete Pavement Repair/Replacement

The repair and replacement of concrete pavement at several locations will include, but not be limited to, pot hole patching, joint and cracked sealing, drainage improvements, and subgrade reinforcement. The

condition of all other Hampton Roads Transit properties and locations not addressed above will be assessed for needed concrete repair including, but not limited to: Hampton Transit Center, Newport News Transit Center, Virginia Beach Operations Facility, Hampton Head Quarters Facility, and bus transfer stations at various locations. These improvements have been estimated at \$600,000.

#### Transfer Area Bathroom Design and Repair

This project would design and construct restrooms at existing bus transfer area locations where restrooms currently do not exist. This project may support all Hampton Roads Transit Bus transfer area locations including, but not limited to: Military Circle, Victory Crossing, Cedar Grove, Evelyn Butts, Robert Hall, Net Center and other various locations. Currently HRT does not provide bus drivers restroom facilities at these transfer areas. Drivers have been resorting to using restrooms in local businesses along routes (which is not always welcome), and parking standard heavy duty buses on main arteries and streets, sometimes disrupting traffic. These improvements have been estimated at \$1,000,000.

#### Solar Lights Upgrades

Existing light sources are old, inefficient, and in some cases, do not provide adequate lighting for the areas in which they are located. Upgrades at HRT facilities and transit centers will focus on the replacement of existing lights on poles in parking lots and on and around structures with solar lights. In some cases, solar lighting will be added where no lighting currently exists.. These improvements have been estimated at \$500,000.

#### LEED Existing Building Improvements

This project would bring HRT existing buildings up to LEED standards with energy efficiency and resource conservation upgrades in order to pursue LEED certification on HRT's existing facilities. Many of HRT's existing buildings were designed and constructed over 20 years ago and are not cost efficient to operate and maintain. These upgrades would improve the overall efficiency of the facilities while contributing to a greener environment. and an improved workplace. These improvements have been estimated at \$200,000.

**Table 4.8 Summary of Unfunded Passenger Facility Projects**

Unfunded Capital Project	Cost estimate (FY2011 dollars)
Cedar Grove Transfer Center Replacement	TBD
Ocean View Transfer Location Replacement	\$650,000
Evelyn Butts Transfer Center Improvements	\$1,000,000
Town Center/Pembroke Mall Transfer Center Improvements	\$750,000
Reon Drive Improvements	\$350,000
Pleasure House Transfer Center Area Improvements	\$250,000
Pacific Avenue Transfer Area Improvements	\$550,000
Victory Crossing Improvements	\$500,000
Concrete Pavement Repair/Replacement – Multiple Locations	\$600,000
Transfer Area Bathroom Construction – Multiple Locations	\$1,000,000
Solar Lights Upgrades – Multiple Locations	\$500,000
LEED Existing Building Improvements	\$200,000
<b>Total</b>	<b>\$6,350,000</b>

#### ***Full Size Bus Expansion***

As detailed in Section 4.2, Bus Service Increases, implementation of all recommendations would result in an increase in the peak vehicle requirement by seven buses.<sup>2</sup> At an assumed cost of \$425,000 per vehicle, including pre-wire for Trapeze ITS (Automatic Vehicle Location), this results in a total capital cost of \$2.975 million (\$FY2012) over the six year TDP.

#### ***Real-Time Passenger Information***

HRT would like to be able to provide real-time passenger information to enable its customers to know when the next bus is actually going to arrive at their bus stop. In order to be able to implement such a system, the agency first would need to procure and install Automatic Vehicle Location (AVL) technology fleet-wide. HRT has demonstrated a commitment to this by including the cost of pre-wiring for Trapeze ITS, an AVL system, on its next bus procurements. Once this system is installed on all of the buses, HRT would then need to procure software that uses a predictive algorithm to predict bus arrival times, and finally develop a way for passengers to obtain the information. This could include real-time passenger information displays at key transfer locations as well as a way for passengers to query the system via telephone, text message, or online. Because such a system has not been scoped or designed, an accurate cost cannot be provided.

<sup>2</sup> This figure assumes that the maximum number of vehicles in service occurs during the PM peak period. Summer service, when the VB Wave routes operate, is heavily weighted toward the afternoon. NTD data from FY2009 indicate that the PM peak vehicle requirement is 25 buses greater than the AM peak requirement.

### ***The Tide Parking***

Aside from the costs that are already programmed for The Tide, one area that will most likely need to be expanded over the next six years is parking. The existing parking available at The Tide stations is limited, with park and ride lots at 4 of the 11 stations, as shown in Table 4.9. There are park and ride facilities at the two easternmost stations, Newtown Road and Military Highway, and additional parking has been negotiated through a lease arrangement with a church across Kempsville Road from the Newtown Road station. At the western end of the line, there is no parking currently available, although HRT has considered the idea of some type of shared parking with the Medical Center or a privately owned lot adjacent to the EVMC/Ft. Norfolk station. HRT will need to monitor parking demand at The Tide stations and seek additional parking accommodations if necessary.

**Table 4.9 Parking at The Tide Stations**

Station	Current Parking (at Opening)
<b>EVMC/Ft. Norfolk</b>	-
<b>York St./Freemason</b>	-
<b>Monticello</b>	-
<b>MacArthur Square</b>	-
<b>Civic Plaza</b>	-
<b>Harbor Park</b>	176 spaces of the park and ride will be dedicated to The Tide riders.
<b>NSU</b>	Park and Ride with 97 spaces
<b>Ballentine/Broad Creek</b>	-
<b>Ingleside Road</b>	On-street parking for area residents
<b>Military Highway</b>	Park and Ride with 232 spaces
<b>Newtown Road</b>	Park and Ride with 266 spaces and 208 leased spaces at First Baptist Church of Norfolk

**Chapter 4 Appendix**  
**Service Expansion Project Descriptions**

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**Table A4-1 Constrained Capital Expansion Projects**

	Costs/Funding Sources by Year (\$YOE)						
	FY12	FY13	FY14	FY15	FY16	FY17	Total
<b>Transfer Center Improvements</b>							
Military Circle Improvements ( <i>Federal Formula</i> )	\$200,000	\$600,000					\$800,000
NET Center Repaving ( <i>Federal Formula</i> )	\$175,000						\$175,000
Patrick Henry Mall ( <i>CMAQ</i> )	\$650,000						\$650,000
Hampton Transit Center ( <i>ARRA</i> )	\$1,440,000						\$1,440,000
Newport News Transit Center ( <i>ARRA</i> )							
General HRT Facility Improvements ( <i>RSTP</i> )		\$ 116,925	\$ 3,383,075				
<b>Bus Stop Signs</b>							
<i>RSTP</i>	\$591,968	\$1,308,032	\$238,199				\$2,138,199
<b>Bus Stop Shelters (Number of Shelters)</b>	<b>129</b>	<b>113</b>	<b>30</b>	<b>32</b>	<b>34</b>	<b>34</b>	<b>372</b>
Total Funding	\$1,036,197	\$908,671	\$243,580	\$262,341	\$271,282	\$278,418	\$3,000,490
<i>Chesapeake CMAQ</i>	\$150,000						\$150,000
<i>Newport News CMAQ</i>	\$312,400	\$320,000					\$632,400
<i>Newport News RSTP</i>	\$235,237						\$235,237
<i>Virginia Beach CMAQ</i>	\$100,000						\$100,000
<i>System-wide JARC</i>		\$342,250					\$342,250
<i>System-wide Enhancement</i>	\$ 238,560	\$ 246,421	\$ 243,580	\$ 262,341	\$ 271,282	\$ 278,418	\$1,540,603
<b>Bus Replacement (Number of Buses)</b>	<b>9</b>	<b>5</b>	<b>24</b>	<b>23</b>	<b>24</b>	<b>20</b>	<b>105</b>
Total Funding	\$ 3,488,400	\$ 1,976,760	\$10,060,253	\$ 9,958,377	\$10,201,706	\$ 8,570,096	\$44,255,592
<i>State Bond Funding</i>			\$ 6,632,184	\$ 2,119,083	\$ -	\$ -	\$8,751,267
<i>Estimated Local Advance Capital Contribution Match</i>			\$ 1,658,046	\$ 529,771	\$ -	\$ -	\$2,187,817
<i>Federal Formula</i>			\$ 366,362	\$ 4,692,292	\$ 2,971,064	\$ 1,715,342	\$9,745,060
<i>Federal Formula Match</i>			\$ 67,921	\$ 931,026	\$ 742,766	\$ 428,835	\$2,170,548
<i>CMAQ - Federal</i>		\$ 164,260	\$ 1,335,740	\$ 1,686,205	\$ 6,487,876	\$ 6,425,919	\$16,100,000
<i>Federal Bonus Obligation / Special Appropriation</i>	\$ 2,790,720	\$ 1,450,000					\$4,240,720
<i>Estimated State Match</i>	\$ 558,144	\$ 290,000					\$848,144
<i>Estimated Local Advance Capital Contribution Match</i>	\$ 139,536	\$ 72,500					\$212,036
<i>SOG Grant Request (to replace some of above funding)</i>							\$12,422,700
<b>Van Purchases for Vanpool Program (Traffix)</b>	<b>6</b>	<b>18</b>	<b>11</b>	<b>14</b>	<b>10</b>	<b>9</b>	<b>68</b>
Cost	\$ 153,000	\$ 451,794	\$ 291,832	\$ 361,803	\$ 247,038	\$ 225,796	\$1,731,263
<i>Federal Section 5307 Formula Funds</i>	\$ 122,400	\$ 361,435	\$ 233,466	\$ 289,442	\$ 197,630	\$ 180,636	\$1,385,010
<i>Estimated State Match</i>	\$ 24,480	\$ 72,287	\$ 46,693	\$ 57,888	\$ 39,526	\$ 36,127	\$277,002
<i>Estimated Local Advance Capital Contribution Match</i>	\$ 6,120	\$ 18,072	\$ 11,673	\$ 14,472	\$ 9,882	\$ 9,032	\$69,251

**Values in italics indicate funding source; all other values represent expenditures.**



**Table A4-1 Constrained Capital Expansion Projects (continued)**

	Costs/Funding Sources by Year (\$YOE)						Total
	FY12	FY13	FY14	FY15	FY16	FY17	
<b>Ferry Replacement</b>							
<i>Federal Formula, State Match, ACC, RTSP, CMAQ</i>			\$ 2,000,000			\$ 2,122,416	\$4,122,416
<b>The Tide</b>							
Vehicle Maintenance and Vehicle Component Replacement and Overhaul		\$ 2,143,620	\$ 637,100	\$ 1,240,540	\$ 832,500		\$ 4,853,760
Infrastructure Replacement and Rehabilitation (Track, Traction Power, Signals, SCADA)			\$ 35,000	\$ 49,360	\$ 974,610	\$ 820,760	\$ 1,879,730
Total Cost	\$ -	\$ 2,143,620	\$ 672,100	\$ 1,289,900	\$ 1,807,110	\$ 820,760	\$ 6,733,490
<i>Federal Section 5309 Formula Funds</i>		\$ 1,714,896	\$ 537,680	\$ 1,031,920	\$ 1,445,688	\$ 656,608	\$ 5,386,792
<i>Estimated State Match</i>		\$ 37,111	\$ 72,587	\$ 139,609	\$ 195,168	\$ 88,642	\$ 533,117
<i>Estimated Local Advance Capital Contribution Match</i>		\$ 391,613	\$ 61,833	\$ 118,671	\$ 166,254	\$ 75,510	\$ 813,881
<b>Paratransit</b>							
Replacement of Paratransit Vans (33 vans) <i>(Federal Formula, State Match, ACC, RTSP, CMAQ)</i>				\$ 975,000	\$ 1,530,000		\$ 2,505,000
<b>Non-Revenue Vehicles</b>							
Replacement of Support Vehicles (49 vehicles) <i>(Federal Formula, State Match, ACC, RTSP, CMAQ)</i>		\$ 350,000	\$ 229,500	\$ 676,260			\$ 1,255,760
<b>Technology Improvements - Software and Hardware</b> <i>(Federal Formula, State Match, ACC, RTSP, CMAQ)</i>							
PeopleSoft HRMS	\$ 150,000	\$ 312,000					\$ 462,000
PeopleSoft Financial System	\$ 327,800	\$ 1,100,000	\$ 613,320				\$ 2,041,120
Automated Bus Dispatch System		\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000		\$ 2,000,000
Hardware		\$ 100,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 200,000	\$ 900,000
<b>Equipment Upgrade and Acquisition</b> <i>(Federal Formula, State Match, ACC, RTSP, CMAQ)</i>							
Alignment Machine		\$ 45,000					
Tir Pressure and Tread Depth Machine	\$ 220,000						
Vehicle Brake System	\$ 224,788						
EMS - Compliance		\$ 175,000	\$ 175,000	\$ 175,000	\$ 175,000	\$ 175,000	\$ 875,000
Solar Light Project	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 150,000
Radio Upgrade	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 300,000
Fare Collection Equipment	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 1,500,000
Safety and Security System Support	\$ 238,560	\$ 246,421	\$ 243,580	\$ 262,341	\$ 271,282	\$ 278,418	\$ 1,540,603
<b>Southside Maintenance and Administration Facility</b> <i>Federal and State DOT Discretionary, ACC, RSTP, FSTP</i>	\$ 12,900,000						\$12,900,000

**Values in italics indicate funding source; all other values represent expenditures.**

## Chapter 4: Service Expansion Project Descriptions - Appendix

**Table A4-2 Bus Service Changes Detail**

Route	Description	City	Current Headway				Proposed Headway				Days/Times of Operation	
			Peak	Mid-Day	Sat	Sun	Peak	Mid-Day	Sat	Sun	Current	Proposed
1	CG to Granby/Ocean View	Norfolk	30	60	60	60	30	30	60	NS	All	Mon-Sat
1	CG to Pleasure House/Shore	Norfolk	30	60	60	NS	30	30	60	60	Mon-Sat	All
36	Pleasure House/Shore to TCC	Virginia Beach	60	60	60	NS	30	60	60	NS	Mon-Sat	Mon-Sat
12	So Norfolk to TCC	Norfolk/VB	60	60	60	NS	60	60	60	NS	Mon-Sat	Extend to 10 PM
14	Robert Hall Blvd/TCC Chesapeake	Chesapeake	60	60	60	NS	60	60	60	NS	Mon-Sat	Extend to 10 PM
8	CG to ETB	Norfolk	30	30	60	60	30	30	60	60	All	All
15	ETB to Mil Hwy/Greenbrier/Robt Hall	Norfolk/Chesapeake	15	30	30	60	15	15	30	60	All	All
21	NAS to Amph Base	Norfolk	NA	NA	NA	NA	30	30	30	60	NA	All
18	CG to Amph Base	Norfolk	60	60	60	NS	60	60	60	NS	Mon-Sat	Mon-Sat
20	CG to VB	Norfolk/VB	30	30	60	60	30	30	30	30	All	All
20	CG to Pembroke E	Norfolk/VB	30	NS	60	NS	30	30	NS	NS	WD Peak + Sat	Weekday
23	Med Tower to Janaf	Norfolk	30	30	30	60	15	30	30	60	All	All
24	Lynnhaven to Pembroke E	Virginia Beach	NA	NA	NA	NA	60	60	60	NS	NA	Mon-Sat
25	Newtown/Mil. Circle/Princess Anne	Norfolk	60	60	NS	NS	60	60	NS	NS	Weekday	Weekday
27	Mil Circle to Pleasure House	Virginia Beach	30	60	60	NS	30	60	60	NS	Mon-Sat	Extend to 11 PM
28	Newtown Rd to VB	Virginia Beach	NA	NA	NA	NA	30	30	30	30	NA	All
30	Oceanfront (Off-season)	Virginia Beach	NA	NA	NA	NA	30	30	30	NS	NA	Mon-Sat
38	Oceana/Dam Neck	Virginia Beach	NA	NA	NA	NA	30	NS	NS	NS	NA	Weekday Peak
45	CG to Portsmouth	Portsmouth	30	30	30	60	15	30	30	60	All	All
47	Court/County to Village/Academy	Portsmouth	30	30	30	NA	30	30	30	NA	Mon-Sat	Extend to 10 PM
106	Warwick Blvd	Newport News	60	60	60	60	15	15	30	30	All	All
107	Denbigh	Newport News	60	60	60	60	NS	NS	NS	NS	Mon-Sat	NA
112	Jefferson Blvd	Newport News	30	30	30	60	30	30	30	60	All	All
116	Ft. Eustis	Newport News	60	60	60	60	60	60	60	60	All	All
108	Lee Hall	Newport News	60	60	60	60	60	60	60	60	All	All
119	Jefferson/Denbigh	Newport News	40	40	NS	NS	60	60	60	60	Weekday	All

## Chapter 4: Service Expansion Project Descriptions - Appendix

Table A4-2 Bus Service Changes Detail (continued)

Route	Description	City	Current			Projected			Net Change			PRIORITY
			Peak Vehicles	Annual Revenue Hours	Annual Operating Cost	Peak Vehicles	Annual Revenue Hours	Annual Operating Cost	Change in Annual Operating Cost	Change in Peak Vehicles	Change in Operating + Annualized Capital Cost	
1	CG to Granby/Ocean View	Norfolk	4			3	12,066	\$930,791		-1		
1	CG to Pleasure House/Shore	Norfolk	5	31,276	\$ 2,412,639	5	22,399	\$1,727,840	\$2,396,634	0	\$ 2,426,991	High
36	Pleasure House/Shore to TCC	Virginia Beach	1	6,585	\$ 507,987	4	13,120	\$2,658,630		3		
12	So Norfolk to TCC	Norfolk/VB	2	7,788	\$ 600,766	2	10,065	\$776,396	\$175,630	0		Medium
14	Robert Hall Blvd/TCC Chesapeake	Chesapeake	2	9,218	\$ 711,077	2	10,989	\$847,691	\$136,615	0		High
8	CG to ETB	Norfolk	4	23,170	\$ 1,787,352	3	14,750	\$1,137,776		-1		
15	ETB to Mil Hwy/Greenbrier/Robt Hall	Norfolk/Chesapeake	11	48,674	\$ 3,754,697	8	38,692	\$2,984,701	\$276,275	-3	\$397,703	High
21	NAS to Amph Base	Norfolk	NA	NA	NA	4	21,984	\$1,695,846		4		
18	CG to Amph Base	Norfolk	1	5,379	\$ 414,924	2	8,680	\$669,575	\$254,651	1	\$285,008.63	Low
20	CG to VB	Norfolk/VB	12	53,638	\$ 4,137,615	12	38,827	\$2,995,134	-\$49,562	0	-\$49,562	High
20	CG to Pembroke E	Norfolk/VB					14,168	\$1,092,920				
23	Med Tower to Janaf	Norfolk	6	30916.47	\$ 2,384,896	10	34177.5	\$ 2,636,452	\$ 251,556	-4	\$130,127	Medium
24	Lynnhaven to Pembroke E	Virginia Beach	NA	NA	NA	1	4,030	\$310,874	\$310,874	1	\$341,231	Low
25	Newtown/Mil. Circle/Princess Anne	Norfolk	2	9,371	\$ 722,879	2	9,777	\$754,198	\$31,319	0		High
27	Mil Circle to Pleasure House	Virginia Beach	2	6,456	\$ 498,016	2	6,766	\$521,929	\$23,913	0		High
28	Newtown Rd to VB	Virginia Beach	NA	NA	NA	3	17,355	\$1,338,765	\$1,338,765	3	\$1,429,836	Medium
30	Oceanfront (Off-season)	Virginia Beach	NA	NA	NA	2	8,566	\$660,781	\$660,781	2	\$721,496	Medium
38	Oceana/Dam Neck	Virginia Beach	NA	NA	NA	4	6,048	\$466,543	\$466,543	4		Low
45	CG to Portsmouth	Portsmouth	4	22,917	\$ 1,767,802	7	26,382	\$2,035,107	\$267,306	3	\$358,377	Medium
47	Court/County to Village/Academy	Portsmouth	4	11,899	\$ 917,889	4	12,829	\$989,629	\$71,740	0	\$71,740	Medium
106	Warwick Blvd	Newport News	5	17,847	\$ 1,376,691	8	40,588	\$3,130,958	\$1,408,912	2	\$1,469,626	High
107	Denbigh	Newport News	1	14,719	\$ 1,135,448	0	-	\$0				
112	Jefferson Blvd	Newport News	5	22,144	\$ 1,708,152	4	22,055	\$1,701,323				
116	Ft. Eustis	Newport News	2	12,584	\$ 970,713	1	6,478	\$499,674				
108	Lee Hall	Newport News	NA	NA	NA	1	6,478	\$499,674				
119	Jefferson/Denbigh	Newport News	1	3,132	\$ 241,630	2	13,092	\$1,009,917				

**Hampton Roads Transit**

**Transit Development Plan**

**FY 2012 through FY 2017**



**APPENDIX**

**Title VI Report**

**FTA Triennial Review**

**2009, 2010, 2011 Audit Reports**

**December 8, 2011**



3400 Victoria Boulevard, Hampton, Virginia 23661  
Phone: 757-222-6000 ~ Southside Fax: 757-222-6103  
Peninsula Fax: 757-222-6195 ~ [www.hrtransit.org](http://www.hrtransit.org)

January 12, 2011

Deborah Haines  
Civil Rights Officer  
1760 Market Street  
Suite 500  
Philadelphia, PA 19103-4124

Re: Hampton Roads Transit (HRT) 2011 Title VI Program

Dear Ms. Haines:

Attached you will find HRT's 2011 Title VI Program. As requested, HRT is submitting the updated program 30 days before the current program expires. HRT's current Title VI program expires on February 14, 2011.

Thank you very much for taking the time to review this program updated Title VI Program. Please contact Karen Waterman, Transit Development Manager, at 757-222-6000 ext. 6699 or [kwateman@hrtransit.org](mailto:kwateman@hrtransit.org) with any questions you may have.

Sincerely,

A handwritten signature in black ink, appearing to read "P. Shucet", written over a circular scribble.

Philip A. Shucet,  
President and CEO

cc: Ray Amoruso  
Sharon Foster  
Vince Jackson  
Karen Waterman  
Keisha Branch

Document Control: EX516-GS-19 12016

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**HAMPTON ROADS TRANSIT**

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**Title VI Program**

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**January 12, 2011**

**(Due February 14, 2011)**

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## **Introduction:**

### **Hampton Roads Transit Title VI Program**

FTA requires recipients to report certain general information to determine compliance with Title VI. The collection and reporting of this program information constitutes the recipient's Title VI Program. To ensure compliance with 49 CFR Section 21.9(b), FTA requires that all recipients document their compliance by submitting a Title VI Program to FTA's regional civil rights officer once every three years.

The contents of the submission include the following information:

- A. A summary of public outreach and involvement activities undertaken since the last submission.
- B. A copy of the agency's plan for providing language assistance.
- C. A copy of the agency procedures for tracking and investigating Title VI complaints.
- D. A list of any Title VI investigations, complaints, or lawsuits filed with the agency.
- E. A copy of the agency's notice to the public that it complies with Title VI and instructions to the public on how to file a complaint.
- F. Requirements for recipients that provide service to geographic areas with a population of 200,000 or more people in order to comply with 49 CFR U.S.C. 5307. These requirements are:
  - 1. Requirement to Collect Demographic Data
  - 2. Requirement to Set System-wide Service Standards
  - 3. Requirement to Set System-wide Service Policies
  - 4. Requirement to Evaluate Service and Fare Changes
  - 5. Requirement to Monitor Transit Service

## **A. Summary of Public Outreach Activities 2008-2010**

### **1. On-Going Opportunities for Public Involvement:**

#### ***The Transit Riders Advisory Committee:***

The Transit Riders Advisory Committee (TRAC) is a subcommittee under the Transportation District Commission of Hampton Roads (TDCHR) Executive Committee and is operated by citizens on a voluntary basis. Members, should include (but not be limited to) HRT customers and persons who currently utilize or have the desire to utilize public transportation. Members are appointed by the TDCHR Executive Committee Chairperson upon recommendation by HRT staff and/or the Commissioner(s) of the represented city. The TRAC reports to the TDCHR Executive Committee at each regular meeting. A written report is prepared by the Recording Secretary and reviewed by the committee Chairperson and/or Vice-Chairperson and HRT staff to be submitted to the TDCHR Executive Committee Chairperson prior to presentation to the full TDCHR Commission meeting. The HRT staff provides assistance as required to ensure that the report is prepared and placed on the TDCHR Executive Committee and TDCHR agendas. The TRAC was established by the TDCHR in July 2009 (See Appendix A for more information). The purpose of the TRAC is as follows:

- Provide HRT administration with feedback and recommendations for improving operational or service issues affecting HRT customers
- Provide input into HRT's customer outreach activities
- Provide HRT customers and the community at-large with information about HRT services and soliciting input concerning service improvements
- The TRAC may be comprised of up to 14 voting members, which shall include at least one resident from each city and one service representative.

#### ***Community Relations:***

- How to Ride: Part of HRT's regular community outreach includes partnering with community organizations, business and schools to teach people use HRT services.
- Special Events: HRT participates in several special events to promote and educate the public about HRT services.

#### ***TDCHR Public Comment Period (Found in Article III: Section 6 of the TDCHR Bylaws):***

- As required by law, all regular and special meetings of the Commission, and any of its Committees or Subcommittees, shall be open to the public and notice thereof shall be given. Unless a meeting is called for the purpose of a public hearing, members of the public shall have no right to be heard or otherwise participate in the proceedings of the meeting, except to the extent the Chairperson of the meeting may in specific instances grant.
- To enhance public involvement at meetings of the Commission, the Chairperson shall schedule at least one pre-meeting comment period in each calendar year quarter:

- Two to be held on the Peninsula and two to be held on the Southside; and
- The President/CEO of HRT shall cause the HRT website to provide daily opportunity for the public to comment on HRT policies and operations by email or other means.

## **2. Public Involvement Conducted for Transit Service Changes**

### ***Service Changes:***

HRT has a regular process to evaluate its services. Annual service changes are made based on this process. Service changes are communicated to the public using the following channels:

- HRT website
- Facebook & Twitter
- Distribution of customer alerts at the transfer centers and on the affected routes
- Automated service announcements on the buses

***New Fare Structure Launch:*** In the fall of 2008 HRT implemented a new fare structure. Transfers were eliminated and a day pass was introduced. There was a comprehensive and award winning (VA Transit Association Marketing Award) communications and marketing campaign called “Simplify Your Ride” to communicate fare structure changes to the public (See the communications plan in Appendix A).

### ***Public Hearings*** (See policy in Appendix A):

In accordance with FTA guidelines, HRT will hold a public hearing when there is an intended increase to the basic fare structure or major decrease service. HRT defines a major service decrease as total elimination of a route or a service reduction of 25% or more of transit vehicle miles or 25% or more of service hours of a route. The following list below shows the public hearings held during this Title VI program period:

- March 2008- Proposed Fare structure changes
- April 2008- Route 61 & 24 Route Elimination
- May 2009- Hampton Residential Service Elimination
- May 2009-Max 960 & 963 Service Reduction
- September 2010- Route 76 Elimination

### ***New Services:***

Portsmouth Loop: April 2008 HRT launched a new downtown shuttle service in Portsmouth, VA. A launch ceremony was held in Portsmouth in partnership with the City of Portsmouth.

- VB Wave: May 2008 HRT rebranded the VA Beach Trolley service to the VB Wave. Rebranding included introduced hybrid shuttles to the fleet to be used in place of the trolleys. A launch ceremony was held in Virginia

- Beach in partnership with the City of VA Beach.
- New Service to Suffolk (See attached communications plan): February 2009 HRT revised all routes in Suffolk.
- Peninsula Commuter Service (See attached communications plan): June 2009 HRT launched new commuter service on the Peninsula.
- MAX (see the communications plan in Appendix A):
  - In June 2008 HRT launched the MAX Metro Area Express Service. There was an extensive communications and marketing plan to launch the service.
  - Routes 61 and 24 were eliminated due to the launch of MAX. 1 public hearing was held in April 2008 to receive feedback about the route eliminations. Route 61 was revised to the 961 under the MAX launch.

***Charlotte Street Transfer Center Relocation:***

In March 2008, HRT relocated its Charlotte Street Transfer Center to Cedar Grove. This move was directed by the city of Norfolk because of the construction of the new Wachovia office building downtown. Customers were notified of this change through the following channels:

- Media Briefing
- Press Release
- Distribution of a customer service alert at the transfer center, in the bus shelters and on the impacted routes
- Website Announcement
- Automated announcement on the buses
- Customer Service Representatives at the transfer centers

### **3. Public Involvement for Projects and Studies**

***Comprehensive Operations Analysis:***

- In 2008, HRT conducted a Comprehensive Operations Analysis (COA) to better understand the markets that HRT serves, the needs of its customers, and then measure how well it was doing in matching services to markets. Seven public meetings were held in each city to receive comments regarding specific areas of concerns to customers.
- In 2009 upon the completion of a passenger survey, HRT held two additional public meetings on September 23rd and 24th, one in Hampton and one in Norfolk to release the results of the survey and receive public feedback. Both meetings were held at HRT administrative offices in each respective city. Both locations are transit-accessible.

***The Tide – Norfolk’s light rail transit system:***

During the various study phases of the Norfolk Light Rail study, a Public Involvement Plan was implemented to reach out and educate Norfolk residents, business owners and citizens within the Hampton Roads region.

- When the Full Funding Grant Agreement was signed on October 1, 2007, a new Public Outreach plan was implemented that would direct outreach activities throughout construction.
- A new website – [www.ridethetide.com](http://www.ridethetide.com) was activated on October 1<sup>st</sup> as well that would focus on The Tide, construction activities, construction alerts, street closures, news releases, pictures, publications and previous information such as the Final Environmental Impact Statement published in October 2005. The website continues to be a source of information on The Tide.
- The Tide groundbreaking was held on December 8, 2007 at Harbor Park where the initial phase of construction would begin in late December. On December 11, 2007 the first of Two construction kick-off open houses was held to educate the residents near and along the alignment about upcoming construction- December 11, 2007 at Maury High School and December 12, 2007 at Lake Taylor High School.
- Postcards announcing the meetings were mailed to all addressed located within a ¼ mile of the construction areas, ad was placed in the Virginian Pilot on November 29, 2007, information was included in the weekly packets to civic leagues sent out by the City of Norfolk, meeting information was posted on gohrt.com, ridethetide.com, and the City of Norfolk website. A media alert was sent out on December 11, 2007. A combined total of 157 citizens of Norfolk and Hampton Roads Transit staff and consultants attended the meetings.
- HRT staff then began a round of meetings with the various neighborhoods along the alignment, visited the business within the Downtown area to get information on how their employees and/or customers enter their businesses, trash pickup, deliveries, etc.
- Two Public Outreach Coordinators were assigned to work with the two sections of the alignment during construction:
  - Section 1 – from the west end at the Eastern Virginia Medical Center Station throughout Downtown Norfolk to Harbor Park
  - Section 2 – from Harbor Park over to the area of Norfolk State University and all the way to the east end of the alignment at Newtown Road
- A walk-up Public Outreach office opened in Downtown Norfolk on January 18, 2008 allowing people to come in and get information on The Tide which included construction updates. The address was 403A Granby Street. The office closed on March 31, 2009.
- Prior to construction beginning in the Downtown area, HRT staff formed a partnership with the Downtown Norfolk Council to work together to help minimize the impacts to the businesses in the downtown area. Some of these included creating signs directing people to the various businesses, helping to identify safe pedestrian access areas, access to parking garages and an interactive map on their website to inform people on street closures, access points, etc.

- A communications database was started at HRT to include each phone call received and the comments/concerns from the caller, follow up, one-on-one meetings with residents, businesses, concerns that were fielded to HRT staff, etc. This also helped to establish a mailing/emailing list for any notices to be sent out
- In April 2008, The Tide hotline was established for anyone who had issues/concerns and needed to speak with a member of the construction team or just wanted information on The Tide. Concorde Communications was contracted to intake information and send out immediately to staff. The number was 1-877-456-TIDE (8433). The Tide hotline was discontinued on July 31, 2010.
- Prior to initial construction in the Downtown area, the Section 1 Outreach Coordinator conducted meetings with individual businesses and property owners to review the potential construction impacts. Staff from the City of Norfolk, and contractors also attended these meetings. For each meeting the coordinator created a Construction Impact Briefing Report.
- When construction began in the Downtown area for the initial utility work, civil track work, etc., a weekly meeting called the Construction Roundtable was implemented and met every Monday to discuss construction issues in regards to The Tide. The meeting was open to all residents, businesses and property owners in the Downtown area. The meetings were held at the Downtown Norfolk Council conference room located at 200 Granby Street. A total of 91 Construction Roundtable meetings were held.
- A monthly outreach meeting called The Tide Alliance was held monthly which included staff from the city, HRT, and business leaders/owners in the Downtown area. The meetings were chaired by Norfolk Councilman W. Randy Wright and were a way to introduce new information on construction, upcoming important events and to get feedback on issues from the business leaders. A total of 20 meetings were held throughout construction.
- HRT created a 6' x 3' static display titled "The Tide is Rising" which held informational brochures. A total of 19 static displays were placed in various areas throughout Norfolk where people could pick up the brochures. These were introduced in April 2009 and were maintained with information until October 2010.
- In May 2009, the "Stay and Play" program began where people could gather for fun and food at various entertainment venues in Downtown to help businesses during this period. The "Stay and Play" began in May 2009 at Viola' and ended in June 2010, with a street party at the 3 restaurants located at the corner of Charlotte and Granby Streets.
- During construction The Tide E-Newsletter was published monthly and sent out through our ongoing database. A total of 26 e-newsletters were published.
- The Section 2 outreach coordinator attended monthly civic league meetings to update the members on the construction schedule, listened to

any concerns, and also sent information for posting in the monthly newsletters that were distributed throughout the community.

- Public Outreach staff made weekly and/or daily trips throughout the construction areas as well. When needed, construction alert flyers were distributed in various ways:
  - Door to door delivery
  - Posted to the [ridethetide.com](http://ridethetide.com) website
  - Posted to the City of Norfolk website
  - Emailed through the Downtown Norfolk Council distribution list
  - Emailed through the HRT construction database
  - Information posted on HRT's Facebook and Twitter pages
- To celebrate the halfway mark of the construction of The Tide, a walking tour was held in September 2009 and was attended by over 150 people. The tour began at Harbor Park and walked the alignment thru Downtown to York Street. Several businesses participated and had refreshments available along the way.
- The Public Outreach team has continued to attend monthly civic leagues and working with the businesses along the alignment.
- For the past year, our focus has moved to begin working on our safety outreach to help people be safe around The Tide. Programs have been created for children in all school levels, businesses, and a general safety program. Meetings have been held with rail operations and city staff to understand some of the hazards within some areas of the alignment as well.
- During the summer of 2010, safety programs geared towards children were presented in all Norfolk Recreation Center programs and some of the elementary schools. We are now focused on working with Norfolk Public Schools with materials and information for teachers to use to teach the information in their classes. Other public outreach for the children included:
  - Parent University (2 programs) – June 2010
  - Hampton University Summer Transportation Intern Program – July 2010
  - Campostella Elementary Science and Math Summer Program – July 2010 (4<sup>th</sup> & 5<sup>th</sup> graders)
  - National Night Out – August 2010
  - Funfest at Grandy Village – August 2010
  - HRT's S.A.F.E.T.Y Carnival – August 2010
  - SafeKids Day – Green Run Recreation Center in Va. Beach – September 2010
  - 7<sup>th</sup> Annual Kids Day Out – VB Aquarium – September 2010
  - Norfolk Parks & Recreation Annual Kids Play Day – September 2010
  - Disney on Ice with Buzz Light Year and students from Ingleside Elementary – September 2010
  - YMCA America on the Move – September 2010

- Virginia Symphony Orchestra – PB&J Series – November 2010
- DNC Annual Grand Illumination Parade – November 2010
- City of Norfolk’s Annual Teen Fest – December 2010
- In the fall of 2010, the Public Outreach team began going door to door in the Downtown area to distribute folders with a flyer about our safety message, brochures and putting out holders with general safety brochures in approximately 40 businesses for the general public to pick up while visiting their establishments. The holders will be checked weekly for refills.
- As a part of this safety distribution, we have also asked employers if we can come in and speak with their staff about being safe around The Tide. Some of the larger employers will send information out via their interoffice intranet, newsletters, bulletin boards, etc. There are a large number of people who also live in the Downtown area, so in talking with some of the facility managers they will look to get information to their tenants either through a newsletter, flyer, posting on bulletin boards, distributing the General Safety Brochure to each resident.

### ***Virginia Beach Transit Extension Study***

The Virginia Beach Transit Extension Study (VBTES) began in May 2009 and work immediately began to create an informational webpage on the current gohrt.com website, draft a list of potential stakeholders to interview about the study, a public involvement plan was drafted, and the selection of a Citizens Advisory Committee began.

- Stakeholder Interviews: A total of 28 stakeholder interviews were conducted to include representatives from special interest groups, civic leaders, hotel and motel association, faith based organizations, Chamber of Commerce, and business leaders in Virginia Beach. Stakeholder interviews were completed in September 2009 and are recorded on file.
- VBTES Webpage: A webpage was created on the [www.gohrt.com](http://www.gohrt.com) website so that the public could look to get information on the study, upcoming meetings, resources and links to various other websites. The webpage has continued to be updated each time a public meeting was held to include the meeting information, presentation, comments submitted by the public and responses to some of these comments. On the monthly Public Involvement Report we update the amount of people who have logged onto the webpage and what pages they are reviewing. As of October 2010, we have had 20,433 hits to the webpage.
- E-Newsletter: Beginning in March 2010, a one-page e-newsletter is sent out every other month to those with email addresses listed in our VBTES database.
- Public Involvement Plan (PIP):
  - Work began to draft the PIP in May 2009 and the first working draft was completed and posted to the VBTES webpage in August 2009. The PIP is the guideline used for public involvement to include public meetings, how information is sent out the public to



- keep them up to date and how the public can contact HRT with comments or other information.
  - Several outlets including the VBTES webpage, Facebook, Twitter, database contact information, email updates, U.S. mail, press/news releases, and advertisements placed in local paper announcing meetings, etc. are being used.
  - PIP Monthly Performance Report is completed and sent out to the project team. We began posting the monthly report on the VBTES webpage in September 2010.
  - The Public Involvement Plan is a working document that will continue to be updated as we progress through this phase of the VBTES.
- Citizens Advisory Committee (CAC): The CAC is composed of 26 members representing communities, businesses and faith based organizations within a ¼ mile of the project corridor (former Norfolk Southern right of way). The first meeting of the CAC was held on October 28, 2009; a second meeting was held on June 24, 2010. Two more meetings will be held with the CAC prior to the end of this phase of the study.
- Public Meetings:
  - Introductory Meetings: The first meetings to introduce the public to the VBTES study were held September 9, 2009 at Princess Anne High School and September 10, 2009 – Virginia Beach Convention Center. The following methods were used to inform the public of these meetings:
    - Ads were placed in the Virginia Beach Beacon on Thursday, September 3<sup>rd</sup> and Sunday, September 6, 2009.
    - A postcard was mailed to all property owners within a ¼ mile of the proposed transit alignment (approximately 5,300 cards).
    - Information was posted to the VBTES webpage.
    - Information was posted to the City of Virginia Beach website.
    - Several postings were sent out on HRT's Facebook, Twitter and GovDelivery.com sites.
    - Postcards were placed in various areas to include several libraries, Virginia Beach City Hall facility, and at various transfer centers to include HRT Silverleaf transfer center, Pembroke transfer center, 19<sup>th</sup> and Pacific Avenue transfer center, and the Virginia Beach campus of Tidewater Community College.
    - A news release was sent out the day of each meeting
    - Meetings were announced on the marquees at Princess Anne High School and at the Virginia Beach Convention Center

- Station Area Workshops were held December 2, 2009 at the Westin at Town Center, Virginia Beach and December 9, 2009 at the Virginia Beach Convention Center. HRT used several ways to inform the public on these meetings:
  - News release was sent out on November 30, 2009
  - Flyer was drafted and emailed to all addressed in the VBTES mailing database (the database was started with information from the September 2009 meetings and continues to be updated)
  - Flyer mailed to those within the database with no email address
  - Information was posted to the VBTES webpage and the City of Virginia Beach website
  - Information about meeting was placed on the City of Virginia Beach cable channel 48
  - Several postings sent out to HRT's Facebook, Twitter, and GovDelivery.com sites
  - Meeting was announced on the marquee at the Virginia Beach Convention Center
- June 30, 2010 Public meeting at the Westin at Town Center, Virginia Beach: HRT used several ways to inform the public on this meeting:
  - News release was sent out on June 30, 2010
  - Flyer was drafted and email to all addresses in the VBTES mailing database
  - Flyer was drafted and mailed to those within the database with no email address
  - Information was posted on the VBTES webpage and the to the City of Virginia Beach website
  - Information about meeting was placed on the City of Virginia Beach cable channel 48
  - Several postings sent out to HRT's Facebook, Twitter and GovDelivery.com sites
  - An ad was placed in the Virginia Beach Beacon on June 20, 2010

**B. Limited English Proficiency Program  
(See Appendix B)**

**C. Agency Procedures for Tracking and Investigating Title VI Complaints**

**HRT Title VI Complaint and Investigation Procedures**

These procedures cover all complaints under Title VI of the Civil Rights Act of 1964, Executive Order 12898 "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" (1994), and Executive

Order 13166 “Improving Access to Services for Person with Limited English Proficiency” (2000), for alleged discrimination in any program or activity administered by Hampton Roads Transit. Any individual, group of individuals, or entity that believes they have been subjected to discrimination prohibited under Title VI and the related statutes may file a complaint, completing the complaint form to the following address:

Title VI Coordinator  
Hampton Roads Transit  
3400 Victoria Blvd.  
Hampton, VA 23661  
757-222-6000

The following measures will be taken to resolve Title VI complaints:

1. A formal complaint must be filed within 180 days of the alleged occurrence. Complaints shall be in writing and signed by the individual or his/her representative, and will include the complainant’s name, address and telephone number; name of alleged discriminating person, basis of complaint (race, color, national origin) and the date of the alleged act(s). A statement detailing the facts and circumstances of the alleged discrimination must accompany each complaint.
2. In the case where a complainant is unable or incapable of providing a written statement, a verbal complaint of discrimination may be made to the HRT Title VI Coordinator. Under these circumstances, the complainant will be interviewed, and the HRT Title VI Coordinator will assist the Complainant in converting the verbal allegations to writing.
3. When a complaint is received, the HRT Title VI Coordinator will provide written acknowledgement to the Complainant, within ten (10) days by registered mail.
4. If a complaint is deemed incomplete, additional information will be requested, and the Complainant will be provided thirty (30) business days to submit the required information. Failure to do so may be considered good cause for a determination of no investigative merit.
5. Within fifteen (15) business days from receipt of a complete complaint, the HRT Title VI Coordinator will determine whether the complaint has sufficient merit to warrant investigation as a Title VI complaint and within five (5) days of this decision, HRT will notify the Complainant, by registered mail, that it will either pursue or not a Title VI investigation.
  - If the decision is not to investigate as a Title VI complaint, the notification shall specifically state the reason for the decision.

6. If the complaint has investigative merit a complete investigation will be conducted, and an investigative report will be completed within sixty (60) days from receipt of the complaint. The report will include a narrative description of the incident, summaries of all persons interviewed, a finding with recommendations for remedial steps as appropriate and necessary. The remedial steps, if any, will be implemented as soon as practicable. The Complainant will receive a copy of the final report together with any remedial steps. The Complainant shall also be notified of his/her right to appeal the decision.
7. Complaints may also be filed with the Federal Transit Administration, Title VI Program Coordinator, FTA Office of Civil Rights, East Building, 5<sup>th</sup> Floor – TCR, 1200 New Jersey Ave., S.E., Washington, D.C. 20590

The Title VI Coordinator shall maintain a log of Title VI complaints received from this process. The log shall include the date the complaint was filed; a summary of the allegations; the status of the complaint; and actions taken by HRT in response to the complaint. Should HRT receive a Title VI complaint in the form of a formal charge or lawsuit, the HRT's legal counsel shall be responsible for the investigation and maintaining a log as described above.

## Title VI Complaint Form

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Home Telephone No: (\_\_\_\_\_) \_\_\_\_\_

Work Telephone No: (\_\_\_\_\_) \_\_\_\_\_

Were you discriminated against because of:

☐ Race ☐ National Origin

☐ Color

☐ Other \_\_\_\_\_

Date of Alleged Incident: \_\_\_\_\_

Explain as clearly as possible what happened and how you were discriminated against. Indicate who was involved. Be sure to include the names and contact information of any witnesses. If more space is needed please use the back of the form.

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Have you filed this complaint with any other federal, state, or local agency; or with any federal or state court? \_\_\_\_\_ Yes \_\_\_\_\_ No

If yes, check all that apply:

\_\_\_\_\_Federal agency \_\_\_\_\_ Federal court \_\_\_\_\_State agency \_\_\_\_\_State court  
\_\_\_\_\_Local agency

Please provide information about a contact person at the agency/court where the complaint was filed.

Name \_\_\_\_\_

Address \_\_\_\_\_

City, State, and Zip Code \_\_\_\_\_

Telephone Number \_\_\_\_\_

Please sign below. You may attach any written materials or other information that you think is relevant to your complaint.

---

**Signature**

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**Date**

**Please mail this form to:**

Title VI Coordinator  
Hampton Roads Transit  
3400 Victoria Blvd.  
Hampton, VA 23661  
757-222-6000

**D. List of any Title VI investigations, complaints, or lawsuits filed with the agency**

No Title VI investigations, complaints, or lawsuits have been filed with HRT since the last Title VI submission (February 14, 2008).

**E. A copy of the agency's notice to the public that it complies with Title VI and instructions to the public on how to file a discrimination complaint.**

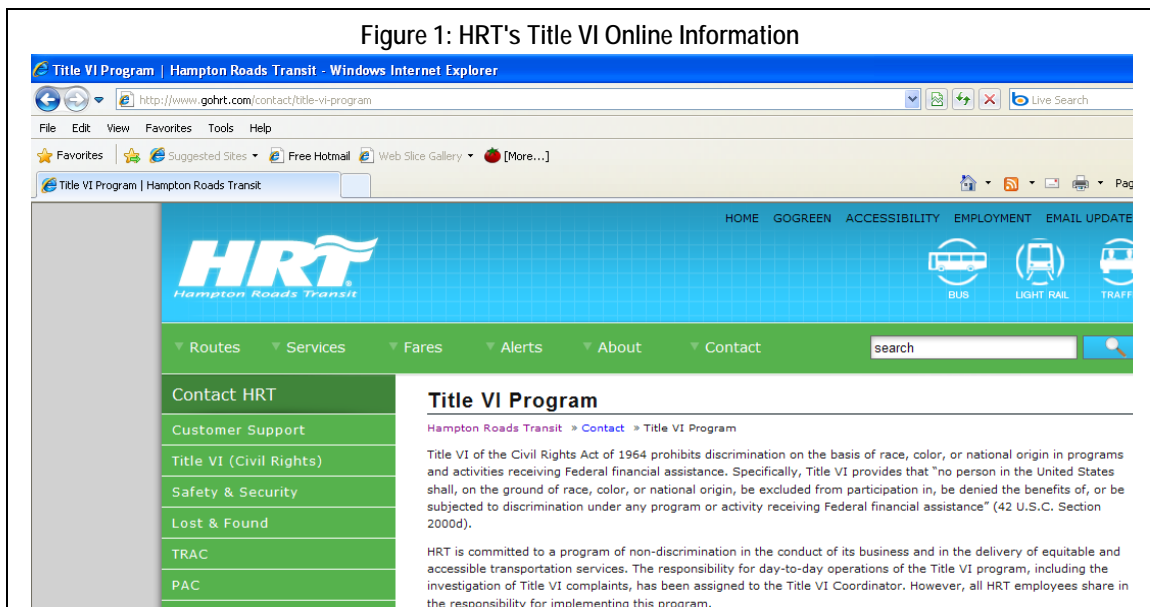
**HRT Title VI Notice**

Title VI of the Civil Rights Act of 1964 prohibits discrimination on the basis of race, color, or national origin in programs and activities receiving Federal financial assistance. Specifically, Title VI provides that "no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance" (42 U.S.C. Section 2000d).

HRT is committed to a program of non-discrimination in the conduct of its business and in the delivery of equitable and accessible transportation services. The responsibility for day-to-day operations of the Title VI program, including the investigation of Title VI complaints, has been assigned to the Title VI Coordinator. However, all HRT employees share in the responsibility for implementing this program.

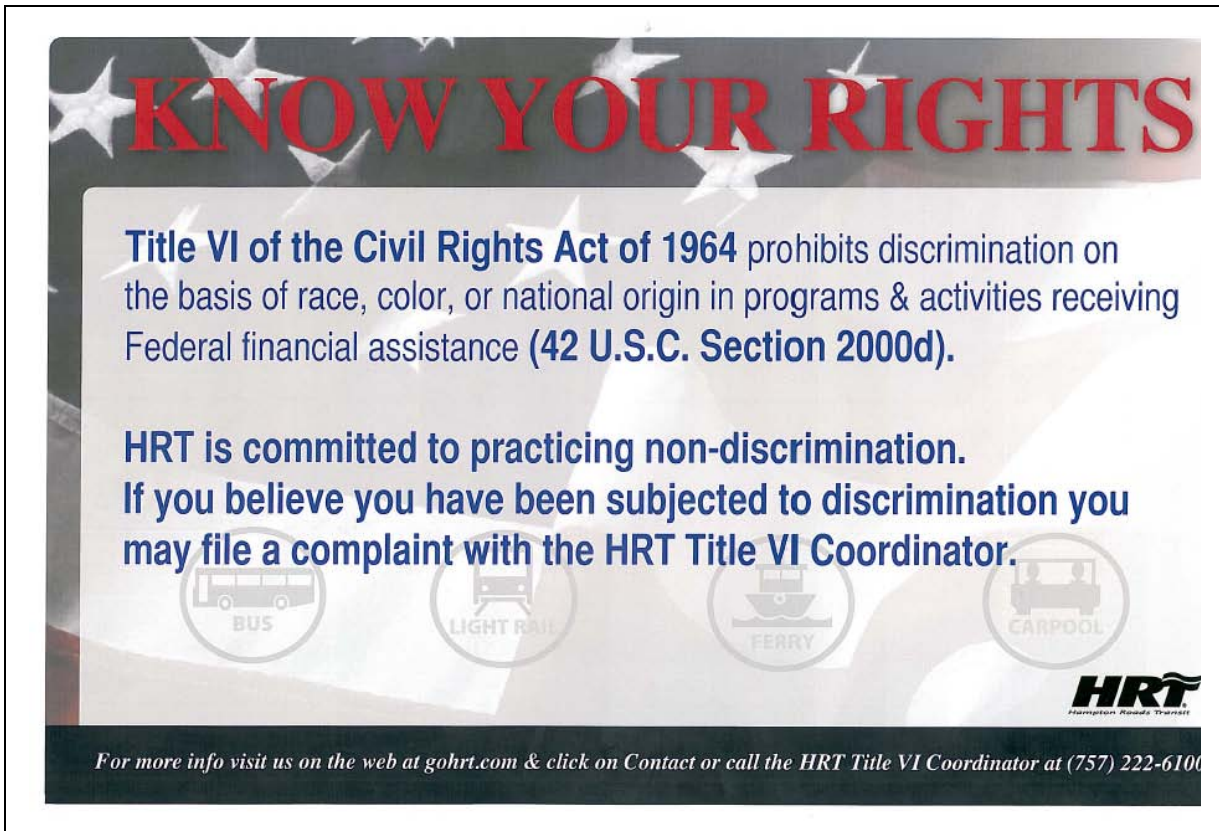
This notice, along with HRT's Title VI Complaint and Investigation Procedures and Complaint form as so shown in Section C are located on HRT's website at <http://www.gohrt.com/contact/title-vi-program>. Figure 1 shows this webpage. This information can also be found by accessing HRT's main webpage, [www.gohrt.com](http://www.gohrt.com), and clicking on Contact.

Figure 1: HRT's Title VI Online Information



The following notice has been placed on every HRT bus.

Figure 2: HRT Bus Title VI Notice



A Title VI notice has also been placed in HRT transfer centers and reception areas in Norfolk and Hampton administrative offices.

**F. Program-Specific Requirements and Guideline for Receipts Serving Large Urbanized Areas**

**1. Demographic Data/Mapping**

Within the HRT service area, according to the 2000 U.S. Census, the minority population is approximately 40% of the total population and the low-income population is 11% of the total population. The minority population was calculated by subtracting all the "White-Only" population as defined in the US 2000 Census from the area's total population. The low-income population was calculated as those persons in poverty as identified by the US 2000 Census. Please see Appendix C for the Base Map, maps of census tract block groups in HRT's service area, and maps of Title VI (minority and low-income) population areas.



## 2. Systemwide Service Standards

### Vehicle Load

Loading standards are created to maintain acceptable passenger loads onboard buses. Passenger loading limits have a direct correlation with headways – If buses are overcrowded, then additional service may be warranted, resulting in shorter headways. Another option to increase capacity is to operate larger buses on the route.

The load factor is an indicator of the extent of probable overcrowding or the need for additional vehicles. It is expressed as a percent of the seating capacity of a vehicle at the maximum load (busiest) point of a particular route. Load factor calculations are the primary variable used to assess how buses can be effectively and efficiently allocated among different routes. A load factor that is set above 100 percent means that the agency's policy permits a reasonable amount of standees. A factor below 100% means that all riders are provided a seated ride.

As shown in

Table 1, every rider should have a seat available to them for their entire trip on Max services in the peak and off-peak as well as demand responsive services. All other services vary between a factor of 1.2 or 1.0. HRT verifies loading conditions on a systematic basis during the operating year for all routes through regular field surveys.

**Table 1: Vehicle Load Information**

<b>Service Type</b>	<b>Peak</b>	<b>Off-Peak</b>
Major Hub Radial	120	100
Circulator/Shuttle	120	120
MAX Commuter	100	100
Demand Responsive	100	100

### Vehicle Assignment

HRT currently has Vehicle assignment is made based on route ridership performance and the type of service. Table 2 shows the type of vehicle that is assigned. Fixed bus routes that operate on local streets within the urban areas with more frequent headways are assigned 29-foot buses. Routes in the suburban areas with longer headways are assigned 35 and 40

foot buses. MAX routes, express, limited-stop service that operate along the region's interstate system, are assigned MCI Coach Vehicles. Table 3 shows HRT's fleet and replacement plan. All vehicles are accessible and are rotated daily among the fixed routes based on service type, as maintenance and repair needs permit.

## Table 2: Vehicle Assignment

Vehicle Size Requirement		
Routes	Peak Buses	Vehicle Load
4 Church St.	2	29
5 Willoughby	1	29
11 Colonial Ave.	2	29
12 Indian River Rd.	2	29
17 NET	6	29
18 Ballentine Pl.	1	29
37 Oceana	1	29
41 Craddock	2	29
44 Midtown	3	29
50 Academy Pk.	1	29
57 Deep Creek	2	29
58 Bainbridge Blvd.	1	29
76 Navy Red	1	29
300 Portsmouth shuttle	2	29
25 Newtown Rd.	2	29
26 Norfolk Express	1	29
27 Northampton Blvd.	1	29
29 Rosemont Rd.	2	29
30 Atlantic Ave.	15	29
31 Science Museum Exp.	3	29
32 Lynnhaven Mall	2	29
33 General Boothe Blvd	3	29
64 Smithfield	2	29
102 Queen Street	1	29
110 Thomas Nelson	2	29
111 Riverside	3	29
113 Fort Eustis Express	1	29
115 Fox Hill	2	29
116 Mall Hall Loop	2	29
118 Magruder	2	29
119 Oyster Point	1	29
120 Mallory/109/117	1	29
405 Peninsula Commuter Service	1	29
412 Peninsula Commuter Service	1	29
415 Peninsula Commuter Service	1	29
430 Peninsula Commuter Service	1	29
71 Obici (Suffolk)	1	29
72 Holland Rd. (Suffolk)	1	29
73 Kingsboro (Suffolk)	1	29
74 Lake Kennedy (Suffolk)	1	29
117 Phoebus	2	29
<b>Sub Total</b>	<b>83</b>	
6 Robert Hall Blvd.	3	35
9 Chesterfield	4	35
104 Newsome Park	4	35
107 Denbigh Blvd	1	35
114 Weaver	4	35
2 Hampton Blvd	3	35
8 Tidewater Dr.	4	35
14 Battlefield Blvd	1	35
101 Kecoughtan	3	35
103 Shell Road	4	35
105 Briarfield Road	2	35
47 Churchland	6	35
<b>Sub Total</b>	<b>39</b>	
15 Crosstown	10	40
106 Warwick Blvd	5	40
1 Granby St./36 Pembroke East	7	40
3 Chesapeake Blvd.	6	40
13 Campostella Rd.	3	40
20 Virginia Beach Blvd.	14	40
23 Princess Anne Rd.	5	40
45 Portsmouth	4	40
112 Jefferson Av.	5	40
<b>Sub Total</b>	<b>59</b>	
918 MAX Staff College	1	Coach
919 MAX Silverleaf Station	6	Coach
922 MAX Indian River / Greenbrier	5	Coach
960 MAX Norfolk to Virginia Beach	4	Coach
961 MAX NNTC to DTN	7	Coach
962 MAX Norfolk to Magnolia P & R	4	Coach
121 Williamsburg	2	Coach
963 MAX Norfolk Naval Station	2	Coach
967 MAX Indian River to Ches Sq	4	Coach
<b>Sub Total</b>	<b>35</b>	
<b>Total</b>	<b>216</b>	

Consider using body on chassis vehicle

**Table 3: HRT Fleet and Replacement Plan**

6-YEAR FLEET REPLACEMENT PLAN																									
TROLLEY FLEET	# UNITS	YEAR	MFG	MODEL	LIFE EXPECTANCY	LENGTH	SEATS	W/C LIFT/RAMP	AVERAGE LTD MILEAGE	REPLACEMENT TARGET YEAR															
										2010	2011	2012	2013	2014	2015	2016	2017								
	13	1997	Chance	Trolley	7-yr / 2004	31'	32	No				11	2												
	1	1999	Chance	Trolley	7-yr / 2006	31'	28	Yes					1												
14	↔TOTAL									ANNUAL TROLLEY REQUIREMENT ↔								0	11	3	0	0	0	0	0

BUS FLEET	# UNITS	YEAR	MFG	MODEL	LIFE EXPECTANCY	LENGTH	SEATS	W/C LIFT/RAMP	AVERAGE LTD MILEAGE	REPLACEMENT TARGET YEAR															
										2010	2011	2012	2013	2014	2015	2016	2017								
	2	1993	Orion	5.50L	12-yr / 2005	40'	43	Yes																	
	33	1995	Gillig	Phantom	12-yr / 2007	40'	42	Yes					12	2											
8	1995	Orion	5.50L	12-yr / 2007	40'	43	Yes																		
26	1999	Gillig	Low Floor	12-yr / 2011	35'	32	Yes						18	8											
9	2000	Gillig	Phantom	12-yr / 2012	40'	42	Yes							9											
4	2000	Gillig	Low Floor	12-yr / 2012	29'	26	Yes							4											
24	2001	Gillig	Phantom	12-yr / 2013	35'	34	Yes								15	9									
9	2002	Chance	Opus	12-yr / 2014	29'	23	Yes								9										
16	2002	Gillig	Low Floor	12-yr / 2014	35'	32	Yes									7	9								
15	2002	Gillig	Low Floor	12-yr / 2014	29'	26	Yes									7	8								
16	2003	Gillig	Phantom	12-yr / 2015	35'	36	Yes										16								
1	2003	Gillig	Low Floor	12-yr / 2015	35'	32	Yes								1		1								
11	2004	Gillig	Phantom	12-yr / 2016	40'	41	Yes																		
10	2004	Gillig	Low Floor	12-yr / 2016	40'	40	Yes																		
3	2006	Optima	Opus	12-yr / 2018	29'	23	Yes																		
22	2006	Gillig	Low Floor	12-yr / 2019	40'	38	Yes																		
18	2007	Gillig	Low Floor	12-yr / 2019	40'	38	Yes																		
29	2007	MAX	Low Floor	12-yr / 2019	40'	38	Yes																		
10	2007	LF Hybrid	Low Floor	12-yr / 2019	29'	26	Yes																		
14	2008	LF Hybrid	Low Floor	12-yr / 2020	29'	26	Yes																		
7	2008	Gillig	Low Floor	12-yr / 2020	40'	38	Yes																		
7	2008	MAX	Low Floor	12-yr / 2021	40'	38	Yes																		
2	2009	LF Hybrid	Low Floor	12-yr / 2019	29'	26	Yes																		
296	↔TOTAL									ANNUAL BUS REQUIREMENT ↔								0	0	12	20	21	25	23	34

### Vehicle Headway

Frequency of service is shown below in Table 4. Generally, routes operating in urban areas have 15 to 30 minute headways during the peak, and one hour during the non-peak. Service in the suburban areas generally has one hour headways. It should be noted the specific frequency levels are determined by each sponsoring jurisdiction.

**Table 4: Vehicle Headway**

Route		Terminal	AM Peak 6 to 9	Midday 9 to 3	PM Peak 3 to 6	Evening 6 to Midnight
1	Granby	Amphib Base	30	1hr	30	1hr
		Wards Corner	15	30	15-30	15-30-1hr
		Pembroke	1hr	1hr	1hr	-

		Pleasure House	1hr	1hr	1hr	-
		Lot 39	15	15-30	30	15-30-1hr
		Monticello & 18 <sup>th</sup>	15-30	15-30	30-15	15-1hr
		Haygood	1hr	1hr	1hr	-
		Ocean View	30	30	30	30-1hr
2	Hampton Blvd.	NEX	30	30	30	30-45
		Lot 39	30	30	30	30-45
3	Chesapeake Blvd.	NEX	1hr	1hr	30	1hr
		Ocean View	30	30	30	30-1hr
		Lot 39	30	30	30	30-1hr
4	Church St.	Norfolk General	1hr	1hr	1hr	-
		Lot 39	1hr	1hr	1hr	-
5	Willoughby	Willoughby	1hr	1hr	1hr	-
		Evelyn Butts	1hr	1hr	1hr	-
6	South Norfolk	20 <sup>th</sup> & Seaboard	30	30	30	1hr
		Robert Hall	1hr	1hr	1hr	-
		Lot 39	30	30	30	30-1hr
8	Tidewater Dr	Amphib Base	30	30	30	30-1hr-1hr25
		Lot 39	30	30	30	30-1hr
9	Sewells Pt. Rd.	Evelyn Butts	30	30	30	1hr
		Lot 39	30	30	30	30-1hr
11	Colonial Ave.	Newport & Rhode Island	30	30	30	-
		Lot 39	30	30	30	-

12	Indian River	TCC Virginia Beach	1hr	1hr	1hr	-
		20 <sup>th</sup> & Seaboard	1hr	1hr	1hr	-
13	Campostella Rd.	20 <sup>th</sup> & Seaboard	30	30	30	30-1hr
		Robert Hall	1hr	1hr	1hr	-
		Lot 39	30	30	30	30-1hr
14	Battlefield Blvd.	Robert Hall	1hr	1hr	1hr	-
		TCC Virginia Beach	1hr	1hr	1hr	-
15	Crosstown	Military Circle	15	30	15	15,30,1hr
		Wards Corner	15	30	15	30-1hr
		NEX	30	30	30	30-1hr
		Greenbrier	1hr	1hr	1 hr	1hr
		Evelyn Butts	15	30	15	30-1hr
		Robert Hall	1hr	1hr	1hr	1hr
17	NET		18,6	9	6	18
18	Ballentine Blvd.	Ballentine & Hanbury	1hr	1hr	1hr	1hr
		Lot 39	1hr	1hr	1hr	1hr
20	VA Bch Blvd.	19 <sup>th</sup> & Pacific	30	30	30	30-1hr
		Military Circle	15	30	15	30-1hr
		Pembroke	15	30	20	30-1hr
		Lot 39	15	15,30	15	20,30,1hr
23	Princess Anne Rd.	Best Square	30	30	30	30-1hr
		Norfolk General	30	30	30	30-1hr
25	Newtown Rd	Military Circle	30	30	30	-
		TCC Virginia Beach	1hr	1hr	1hr	-

26	Lynnhaven Mall	Hawkeye & International	1hr	1hr	1hr	-
		TCC Virginia Beach	1hr	1hr	1hr	-
27	Northampton	Pleasure House	1hr	1hr	1hr	-
		Military Circle	1hr	1hr	1hr	-
29	Lynnhaven	Pleasure House	1hr	1hr	1hr	-
		Lynnhaven Mall	1hr	1hr	1hr	-
30	Atlantic Ave.		12	12,10,8	6	6,8,10
31	Aquarium/Camp Grd		15	15	15	15
32	Shoppers Shuttle		-	1hr	1hr	1hr
Route		Terminal	AM Peak 6 to 9	Midday 9 to 3	PM Peak 3 to 6	Evening 6 to Midnight
33	General Boothe Blvd.	Atlantic/68 <sup>th</sup>	1hr	1hr	1hr	-
		Ft. Story	1 trip	1trip	45	-
		Pacific/19 <sup>th</sup>	1hr	1hr	1hr	-
		TCC	1hr	1hr	1hr	-
36	Holland Rd	TCC	1hr	1hr	1hr	1hr
		Pembroke	1hr	1hr	1hr	1hr
37	Oceana –Fri/Sa/Su	Lynnhaven Mall	-	-	1hr	1hr
41		Victory Crossing	33-1hr	1hr	1hr	-
		County & Court	30-1hr	1hr	1hr	-
44	Midtown	Chesapeake Square	1hr	1hr	1hr	-
		Norfolk General	1hr	1hr	1hr	-
45	Portsmouth Blvd.	Victory Crossing	30	30	30	30-1hr10

		Lot 39	30	30	30	30-1hr10
47	High St.	College & Lakeview	1hr	1hr	1hr	-
		County & Court	30	30	30	-
50	Academy Park	Victory Crossing	1hr	1hr	1hr	-
		County & Court	1hr	1hr	1hr	-
57	Deep Creek	Sunkist	1hr	1hr	1hr	-
		Robert Hall	1hr	1hr	1hr	-
58	Bainbridge Blvd.	Robert Hall	1hr	1hr	1hr	-
		20 <sup>th</sup> & Seaboard	1hr	1hr	1hr	-
64	Smithfield	Smithfield PNR	17-1.5hr	-	1.5hr-8	-
		NNTC	17-1.5hr	-	1.5hr-8	-
71	Obici		1hr	1hr	1hr	-
72	Lakeside		1hr	1hr	1hr	-
73	Kingsboro		1hr	1hr	1hr	-
74	South Suffolk		1hr	1hr	1hr	-
101	Kecoughtan	NNTC	35	35	35	35-1hr
		HTC	35	35	35	35-1hr
102	Queen St	Peninsula Town Ctr	1hr	1hr	1hr	1hr
		HTC	1hr	1hr	1hr	1hr
103	Shell Rd	NNTC	30	30	30	30-45
		HTC	30	30	30	30-45
104	Newsome Park	Net Center	30	30	30	30-1hr
		NNTC	30	30	30	30-1hr
105	Briarfield	Peninsula Town Ctr	1hr	1hr	1hr	1hr



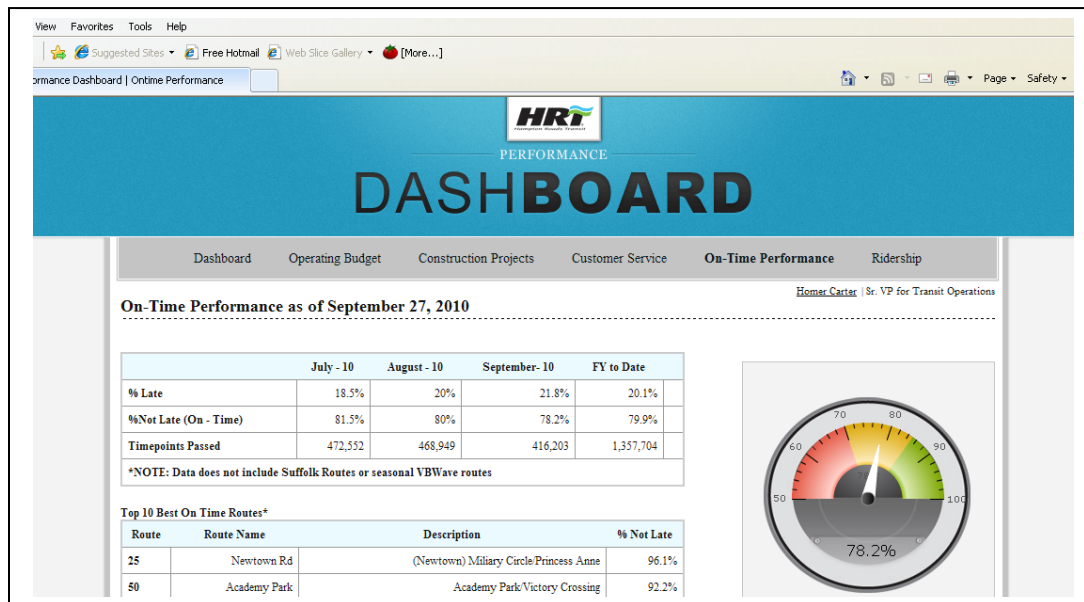
		27 <sup>th</sup> & Maple	1hr	1hr	1hr	1hr
106	Warwick	Ft Eustis	30-1hr	1hr	1hr	1hr
		6 <sup>th</sup> & Ivy	30-1hr	1hr	1hr	1hr
107	Denbigh	RSCC	1hr	1hr	1hr	1hr
		6 <sup>th</sup> & Ivy	1hr	1hr	1hr	1hr
109	Buckroe/Pembroke	Malory & Pembroke	1hr	1hr	1hr	1hr
		HTC	1hr	1hr	1hr	1hr
110	Thomas Nelson CC	Thomas Nelson CC	30-1hr	1hr	1hr	1hr
		HTC	30-1hr	1hr	1hr	1hr
111	Riverside	RSCC	30-1hr	1hr	1hr-30	1hr
		TNCC	30-1hr	1hr	30-1hr	1hr
112	Jefferson Ave.	RSMC	30	30	30	30-1hr
		NNTC	30	30	30	30-1hr
113	Ft Eustis –Fr/Sa/Su	Ft. Eustis	-	-	-	1hr
114	Weaver Rd.	73 <sup>rd</sup> & Warwick	30	30	30	30-1hr
		Pine Chapel & Freeman	30	30	-	30-1hr
		HTC	30	30	30	30-1hr
115	Foxhill	Malory & Pembroke	30	30	30	30-1hr
		HTC	30	30	30	30-1hr
116	Mall Hall Loop	Lee Hall	1hr	1hr	1hr	1hr
117	Phoebus	Veterans Hospital	1hr	1hr	1hr	1hr
118	Magruder	Semple Farm	1hr	1hr	1hr	1hr
		HTC	1hr	1hr	1hr	1hr
119	Oyster Point	Patrick Henry Mall	40	40	40	-

		Fishing Point	40	40	40	-
Route		Terminal	AM Peak 6 to 9	Midday 9 to 3	PM Peak 3 to 6	Evening 6 to Midnight
120	Mallory	Malory & Pembroke	1hr	1hr	1hr	1hr
		HTC	1hr	1hr	1hr	1hr
121	Williamsburg	Williamsburg	30	-	30	-
		NNTC	30	-	30	-
300	Portsmouth Loop		30	30	30	30
918	MAX	Silverleaf	1hr	-	1 trip	-
919	MAX	Silverleaf	25	-	25	-
922	MAX		15,20,35	-	30,19,16	-
960	MAX	19 <sup>th</sup> & Pacific	30	1hr	30	1hr
		Lot 39	30	1hr	30	30-1hr
961	MAX	Lot 39	30	1hr	30	1hr
		NNTC	30	1hr	30	1hr
962	MAX	Suffolk	30	-	30	-
		County & Court	30	-	30	-
967	MAX	Indian River PNR	30	-	30	-

## On-Time Performance

On-time performance for HRT's bus service is measured against the published schedule and actual bus arrival times at 350 designated time points throughout the system. A bus is considered "on-time" if not more than 5 minutes late at each scheduled time point. There is approximately one time point for every 10 bus stops. Actual bus arrival times are captured by HRT's Navigator an automatic vehicle location (AVL) system which uses Global Positioning System (GPS) technology. Bus on-time performance can be impacted by traffic congestion, detours, weather, a larger than anticipated number of boardings, and boardings of passengers with accessibility needs. On-time performance is reported monthly and made the results are made available to the public via HRT's "Performance Dashboard," found online at <http://www.gohrt.com/dashboard/ontime-performance/on-time-performance.html>. A screen shot from this webpage is shown below in Figure 3. Table 5 shows the monthly on-time performance for all routes from September 2010.

**Figure 3: On-Time Performance Dashboard Screenshot**



**Table 5: September 2010 Monthly On-Time Performance**

Route	Route Name	Description	% Not Late
1	Granby St	Downtown Norfolk Pembroke East	88.00%
2	Hampton Blvd	Naval Station Norfolk/Hampton Boulevard	85.00%
3	Chesapeake Blvd	Downtown Norfolk/Naval Station	88.80%
4	Church St	Norfolk General Hospital/ODU/Downtown Norfolk	81.20%
5	Willoughby	Wards Corner/Willoughby	88.80%
6	South Norfolk	Downtown Norfolk/South Norfolk/Robert Hall Boulevard	79.30%
8	Tidewater Drive	Downtown Norfolk/Little Creek Amphib. Base	84.80%
9	Chesterfield	Downtown Norfolk/Chesterfield	86.90%
11	Colonial Ave	Downtown Norfolk/Colonial Place	90.40%
12	Indian River Rd	South Norfolk/TCC Virginia Beach	83.60%
13	Campostella Rd	Downtown Norfolk/Robert Hall Boulevard/TCC Chesapeake	89.70%
14	Battlefield Blvd	Robert Hall Blvd/TCC Chesapeake	75.20%
15	Crosstown	Naval Station Norfolk/Robert Hall Boulevard	81.10%
17	The NET	Downtown Norfolk/NET FREE RIDE	81.90%
18	Ballentine Blvd	Downtown Norfolk/Ballentine Boulevard	85.50%
20	Virginia Beach Blvd	Downtown Norfolk/Virginia Beach Oceanfront	80.00%
23	Princess Anne Rd	Medical Tower/Military Circle/JANAF	77.50%
25	Newtown Rd	(Newtown) Military Circle/Princess Anne	96.10%
26	Bow Creek Blvd	International Parkway/TCC Virginia Beach	88.00%
27	Northampton Blvd	Pleasure House Rd./Military Circle	89.80%
29	Lynnhaven Pkwy	(Lynnhaven) Pleasure House Road/TCC Virginia Beach	91.00%
33	General Booth Blvd	(General Booth) North Seashore/Municipal Center	70.40%
36	Holland Rd	(Holland) Pembroke East	73.90%
37	Oceana	Dam Neck/Oceana/Lynnhaven Mall	49.20%
41	Craddock	Downtown Portsmouth/Craddock	71.00%
44	Midtown	Norfolk General Hospital/Midtown Portsmouth	89.80%
45	Downtown Norfolk/Portsmouth	Downtown Norfolk/Portsmouth	87.90%
47	High St	Downtown Portsmouth/Churchland	91.20%
50	Academy Park	Academy Park/Victory Crossing	92.10%
57	Deep Creek	Robert Hall Boulevard/Camelot	61.10%
58	Bainbridge Blvd	South Norfolk/Bainbridge Boulevard	82.60%
64	Smithfield	Smithfield/Gwaltney and Northrop Grumman	85.50%
76	Naval Station Shuttle	Naval Station Free Shuttle West	86.90%
101	Kecoughtan	(Dwtn. NN/Dwtn. Hamp.) Downtown Newport News/Downtown Hampton	77.50%
102	Queen Street	(Coliseum) Coliseum Mall/Downtown Hampton	80.70%
103	Shell Rd.	(Shell Rd.) Downtown Newport News/Downtown Hampton	78.50%
104	Newsome Park	(Marshall) Downtown Newport News/Newmarket	71.00%
105	Briarfield Rd	(Briarfield) Maple Avenue & 27th Stree/Coliseum Mall	74.40%
106	Warwick Blvd	(Warwick) Newport News/Warwick Boulevard	78.30%
107	Denbigh Blvd	(Warwick) Newport News/Warwick Boulevard	68.00%
109	Buckroe	(Pembroke) Downtown Hampton/Buckroe	88.40%
110	Thomas Nelson CC	(Thomas Nelson) Downtown Hampton/Thomas Nelson	77.40%
111	Riverside	(Denbigh TNCC) Thomas Nelson/Riverside/Denbigh	81.50%
112	Jefferson Ave	(Jefferson) Downtown Newport News/Riverside Hospital	55.10%
113	Fort Eustis Express	(Ft. Eustis) Coliseum Mall/Fort Eustis Express	51.40%
114	Weaver Rd	(Weaver Rd.) Newmarket/Downtown Hampton	71.00%
115	Fox Hill	(Mall Hall) Buckroe/Willow Oaks/Downtown Hampton	74.00%
116	Mall Hall Loop	(Mall Hall) Lee Hall/Patrick Henry Mall Loop	76.70%
117	Phoeo	(Phoebus) Hampton University/V.A. Hospital	82.20%
118	Magruder Blvd	(Magruder) Langley/Semple Farm Road	76.80%
119	Oyster Point Shuttle	(Oyster Point) Patrick Henry Mall/Thimble Shoals Blvd	85.70%
120	Mallory	(Mallory) Downtown Hampton/Mallory/Buckroe	91.80%
121	Williamsburg	Newport News Transportation Center/Williamsburg	78.40%
300	Portsmouth Shuttle	(Downtown) Effingham/Naval Hospital	81.70%
310	Cedar Grove Shuttle	(Downtown) Cedar Grove/Downtown Norfolk	91.90%
918	MAX Express	Virginia Beach to Naval Station Norfolk	91.70%
919	MAX Express	Virginia Beach to Naval Station Norfolk	82.10%
922	MAX Express	Chesapeake-Virginia Beach to Naval Station Norfolk	79.40%
960	MAX Express	Virginia Beach to Norfolk	87.90%
961	MAX Express	Newport News-Hampton to Norfolk	68.60%
962	MAX Express	Suffolk-Chesapeake-Portsmouth to Norfolk	82.60%
963	MAX Express	Hampton to Naval Station Norfolk	73.70%
967	MAX Express	Virginia Beach-Chesapeake to Newport News	75.20%

## **Distribution of Transit Amenities**

**Shelters:** There are approximately 3,490 stops in the HRT system. HRT has primarily relied on jurisdictional requests and funding from each jurisdiction for the placement of the limited number of shelters that have been installed. Shelters have a bench and trash cans. As of September 2010, 191 stops have shelters. As shown in Figure 4 on the following page, 151 of the 191 shelters are located in Title VI areas.

As previously described, in 2009 HRT completed a Comprehensive Operational Analysis (COA). As a part of the COA, the following standards were established to install shelters.

- Stops with at least 50 boardings per day
- ADA accessible location
- Within Right of Way (ROW) preferred

HRT is in the process of procuring a shelter manufacturer to fabricate and install shelters. While the shelters purchased and installed will be based on Regional Surface Transportation Funding provided by member jurisdictions, the locations in each jurisdiction where the shelters will be installed will be determined using the standards listed above.

**Signs:** HRT is in the process of redesigning and replacing its bus stop signs. All the signs in the system will be replaced. The existing signs have reached their useful life and are mounted on a variety of different stanchions, poles, and other non-standard devices. It is HRT's goal to standardize bus stop sign placement on a standard pole at a standardize height. The signs will convey route designations, diagrammatic route maps, bus route numbers, connecting bus route information (where appropriate), destinations, and access information designed for use by all transit riders. All bus stop signs will have a unique five-digit number on the sign that passengers can use to access route and scheduling information by calling HRT customer service. The new signs will be ADA complaint. It is anticipated that installation of the new signs will commence in July 2011 and be completed in August 2012.

**Electronic Ticketing Machines:** HRT has the following Electronic Ticket Machines at the following locations:

1. Hampton Transfer Center
2. Newport News Transfer Center
3. 1500 Monticello Ave (HRT's Administrative Office)
4. 13<sup>th</sup> Street at Oceanfront
5. 17<sup>th</sup> Street at Oceanfront
6. 29<sup>th</sup> Street at Oceanfront
7. 37<sup>th</sup> Street at Oceanfront
8. 41st Street at Oceanfront

The five machines at the Oceanfront support the seasonal VB Wave Service. Given the nature of the seasonal (tourism) it is necessary to have equipment in place that can serve the out-of-town visitors. HRT will likely have new machines at a potential new transfer center in Downtown Norfolk and there is a grant to improve the ferry landside facilities in Portsmouth and Norfolk that includes the purchase of TVM's for the ferry landing locations.

**Service Availability:**

Service availability in each of HRT's seven cities is set by each of its member jurisdictions. This means that the number of routes, service frequency, and service coverage areas as operated by HRT are directly determined by each city during the annual budgetary cycle. Article IV of HRT's Cost Allocation Agreement describes how transit service in the HRT service district is determined.

## **ARTICLE IV**

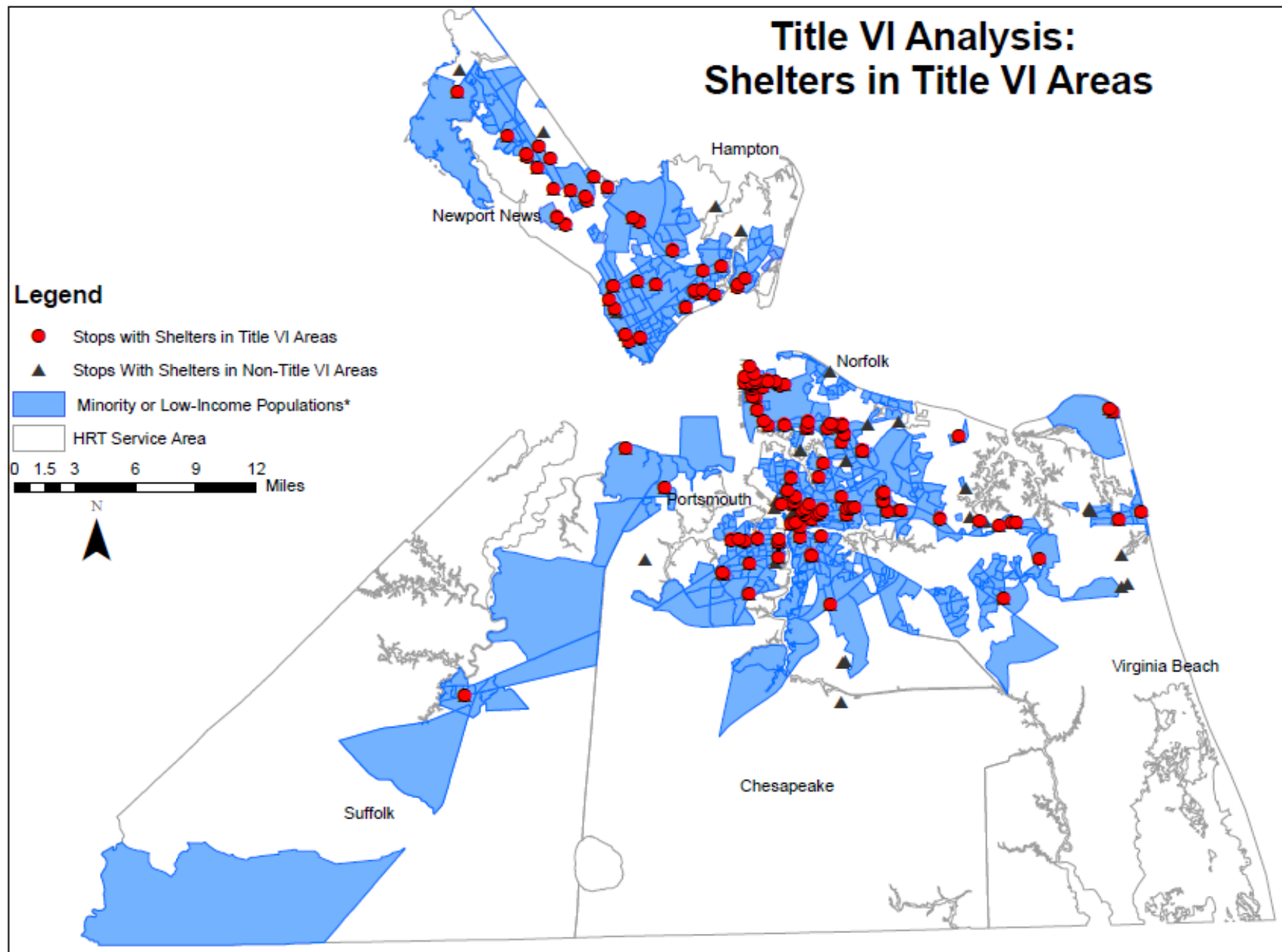
### **PROVISION OF PUBLIC TRANSPORTATION SERVICES**

- A. The Commission will own and operate the consolidated regional public transportation system within and between the Participating Cities.
- B. The Commission recognizes the service provided by local contract carriers and other transportation companies and will attempt to foster continuation and improvement of services provided by these private companies.
- C. Each year, as part of the budgeting process, the Commission will propose a public Transportation Service Program (TSP) for the region. The TSP will contain a description of service such as route name, hours of service to be provided, estimated cost, estimated revenue and estimated city share of the cost of service. The TSP will identify the service program of each Participating City and its contribution based on estimated costs and revenues.
- D. Each Participating City will review its portion of the TSP and recommend revisions where appropriate. After each Participating City has approved funding of its portion of the TSP, the Commission will approve and publish the TSP as the Transportation Service Program of Hampton Roads.
- E. Each Participating City will determine the type, amount and location of public transportation services for which it provides funds within its borders. Each Participating City, by approving its portion of the TSP, agrees to pay monthly in advance its portion of the administrative, capital and net operating costs of the Commission's approved TSP.
- F. Each Participating City will have final determination on the type, amount, and location of public -transportation service provided within its borders. Nothing in this Agreement

will be construed as a requirement that a Participating City must provide public transportation services.

- G. The Commission will provide the transit service contained in the TSP as approved by each Participating City and each city will finance its share of net capital and operating costs incurred by the Commission in providing transportation services contained in the approved TSP.
- H. Additions, deletions, or revisions to the TSP may be proposed at any time by a Participating City by letter from the City Manager or his designated representative to the Executive Director of the Commission. Changes may also be proposed at any time by the Commission by letter from the Executive Director or his designated representative to the City Manager of a Participating City. If the change is to be implemented during the year of the previously approved TSP and increases the total In Service Hours for the Participating City, no federal or state public support funds already allocated will be applied to that service until that service is included in the annual TSP and budget.
- I. Whenever an addition, deletion, or revision to the TSP is proposed, the Commission will develop an estimated cost of the proposed change. The estimated cost will be furnished to the Participating City or Participating Cities affected by the proposed change.
- J. The Participating Cities will review and approve all proposed changes and estimated costs of the TSP before implementation by the Commission. The TSP will be revised to incorporate all changes approved by the Participating Cities. If no response is made by the City Manager or his designated representative before or at the public hearing, in the case of a change requiring a public hearing, or within 15 days before implementation in the case of a minor change, the Commission will assume that there are no objections to the service changes and will proceed.
- K. Any capital cost or operating cost liability incurred by the Commission as a result of a reduction of transit service requested by a Participating City will be paid by the Participating City requesting the reduction until such time as the liability is relieved.

Figure 4: Shelters in Title VI Areas



\*Title VI Populations are Low Income=Census Blocks with at least 11% Population in Poverty and/or Minority Population=Census Blocks with at least 40% Minority Population.  
Source: US 2000 Census, Hampton Roads TPO.

12/13/2010



### **3. Requirement to Set System-wide Service Policies**

- **Vehicle Assignment:** Vehicle assignment is made based on route ridership performance and the type of service. Please refer to Table 2 for the type of vehicle that is assigned. Fixed bus routes that operate on local streets within the urban areas with more frequent headways are assigned 29-foot buses. Routes in the suburban areas with longer headways are assigned 35 and 40 foot buses. MAX routes, express, limited-stop service that operate along the region's interstate system, are assigned MCI Coach Vehicles. All vehicles are accessible and are rotated daily among the fixed routes based on service type, as maintenance and repair needs permit.
- **Transit Security:** See Appendix D, HRT's Security Policy & Procedures.

### **4. Requirement to Evaluate Service and Fare Changes:** (Please see Appendix E.)

### **5. Requirement to Monitor Transit Service**

- For this analysis, Option B of the FTA Title VI Methodology has been utilized to examine if there are significant disparities in service between Title VI and Non Title VI areas. Census tract blocks within  $\frac{3}{4}$  mile of HRT bus routes were identified. Using the sampling function in Microsoft Excel, 25 different census tracts were selected for this analysis. Of these 25 tracts, 12 were found to be Non Title VI areas, and 13 were in Title VI areas.
- The HRT Service Planning Department identified the three most frequently traveled destinations within the bus system, as listed below:
  - Destination #1: Cedar Grove Transit Center, Downtown Norfolk
  - Destination #2: Hampton Transfer Center, Hampton
  - Destination #3: Newport News Transfer Center, Newport News
- Travel between each of the 25 census tracts to each of the three destinations listed above was analyzed. The following travel characteristics were calculated for travel between each census tract and destination- average peak and non-peak hour travel time, required number of transfers, total cost of trip, and cost per trip. These results are shown in Appendix F.
- These results were averaged for each destination and are shown in Table 6. With minor exceptions, the results were better for travel from Title VI areas to the major destinations. Please see Appendix F for the full results.
- Please see Appendix G for a full list of Title VI populations by census tract block group.

**Table 6: Destination Travel Characteristics Averages**

	Destination #1 Cedar Grove Transfer Center				Destination #2 Hampton Transfer Center				Destination #3 Newport News Transfer Center						
Averages	Title VI Census Tract Blocks	Non Title VI Census Tract Blocks	Difference (Title VI- Non Title VI)	Percent Difference	Title VI Census Tract Blocks	Non Title VI Census Tract Blocks	Difference (Title VI- Non Title VI)	Percent Difference	Title VI Census Tract Blocks	Non Title VI Census Tract Blocks	Difference (Title VI- Non Title VI)	Percent Difference			
Peak Hour Bus Travel Time In Minutes		48	56	-8	-16%		82	94	-12	-15%		72	96	-24	-34%
Non Peak Hour Travel Time In Minutes		48	62	-13	-27%		89	92	-3	-3%		86	101	-15	-18%
Number of Transfers		0.54	0.58	-0.04	-8%		1.23	1.33	-0.10	-8%		1.23	1.25	-0.02	-2%
Total Cost of Trip	\$	2.77	\$ 2.83	\$(0.06)	-2%	\$	4.50	\$ 4.21	\$ 0.29	6%	\$	4.42	\$ 4.42	\$ 0.01	0.14%
Distance		10	12	-2	-20%		20	20	0	0%		22	23	-1	-5%
Cost Per Mile	\$	0.39	\$ 0.28	\$ 0.11	28%	\$	0.25	\$ 0.26	0	-4%	\$	0.22	\$ 0.21	\$ 0.01	5%

# APPENDIX A

# Marketing Creative Brief

**Project Name:** MAX Metro Area Express

**Delivery Date:** June 2, 2008

## **Description:**

Develop a multi-media campaign designed to create awareness and promote ridership of the new express service.

## **Objective:**

To reach potential riders by targeting key areas around park-n-ride facilities, military bases and employment destinations. The goal is to convince single – occupancy vehicle commuters to try the MAX.

## **Components of Program:**

- Television
- Radio
- Outdoor (Billboard, Transit)
- Print (Newspaper and Magazine)
- Online ads, Banner ads
- Direct mail
- Public outreach to civic leagues, community groups and more

## **Background:**

Because the Hampton Roads area is a transient community, it presents unique marketing challenges. Military personnel, who make up a bulk of the population, move every three years and newcomers are typically not made aware of transit alternatives. Despite congestion caused by increased population density and major construction projects as well as rising gas prices, motorists are still reluctant to change their driving behaviors in terms of converting to alternative transportation. However, one-fourth of single-occupancy vehicle motorists say they are likely to use an alternative mode of transportation in the future. (SIR 2006 Study)

The MAX service offers:

- Point to point service with few stops
- Stress free ride
- Clean, friendly, comfortable
- Safe, reliable
- WiFi connections (may not be ready by launch date)
- High frequency
- Guaranteed Ride Program (Traffix)

## **Target Audience:**

Primary – Commuters who drive alone to and from work in the Hampton Roads region. Demographic is 25 – 45 years, employed, and have other transportation options.

**Strategies:**

- The campaign is designed in a three phase program, with three separate media buys. Because the service will begin in mid June, it will be more difficult to get commuters and potential riders to consider changing their commuting habits. The first phase of the campaign will begin in June, running through July and will create awareness as well as promote ridership.
- The second phase will begin in September as families are getting ready to start school and commuting habits have a higher possibility for change. Because of phase one awareness, a smaller media buy, strategically placed over an 8 week period will be used.
- The third phase will begin in January of 2009. This placement will be designed to attract commuters when they are looking at New Year's changes and resolutions.

**Tone:**

Appealing, cool, light hearted, informative. Possible link to SOV campaign.

**Measurement:**

- Ridership numbers
- Number of hits to the 'goHRT' web site
- Post campaign survey of awareness

**Production and Media Schedule:**

- February 15, 2008. RFP selection of agency to produce television and radio ads.
- May 23, 2008. Completion of television and radio ads.
- May 2, 2008. Completion of print creative.
- May 30, 2008. Graphics installed on all MAX buses.
- April 25, 2008. MAX bus stop signs complete.
- May 12, 2008. Begin outreach.
- June 2, 2008. Begin 8 week media campaign. (Phase one)
- September 1, 2008. Begin 8 week media campaign. (Phase two)
- January 5, 2009. Begin 4 week media campaign. (Phase three)

**Communications Plan**

**Goal:** To effectively promote the launching of HRT's new premium service, The Max. Effective promotion will increase ridership among existing customers, capture a new strategic population thereby increasing revenue and ensuring sustainability.

**Objective:** To appeal to a market that public service has not traditionally appealed to through marketing and communications campaigns. Maintain existing customers and persuade them to use commuter routes more. Tie in this new service to HRT's other commuter alternatives such as shuttle services and Traffic.

**Target Audiences:**

- Existing commuter route riders
- People who live near Park & Rides
- Military & Shipyard Workers
- Major Business along the routes

**Key Messages**

- The Max is a premium service.
- Riding The Max is convenient
- Riding The Max helps alleviate SOV
- Riding The Max saves you money.
- Riding The Max helps protect the environment.
- Riding The Max is guaranteed.

**Materials:**

- Press Releases/Press Kits
- Brochures
- Transit Grams
- Bus cards
- Web Messages
- Posters
- Newsletter postings

**Activities:**

- Mailings: Civic Leagues, Zip code, Tip Representatives (for Military personnel)
- Presentations to major civic leagues (downtown civic league, oceanfront civic league)
- Meeting with community groups (Downtown Council, Commute Smart Virginia, Condo/Realtors Associations)
- Northside & Southside Kick Off campaigns (for the season including The Max)
- Promotions at transfer centers.

**Communication Channels:**

- Brochures
- Radio
- Television
- Print
- Kick off Campaigns
- On site Promotions

**Coalition Partners:**

- Wawa
- Commute Smart Virginia
- Downtown Norfolk Council
- Farm Fresh
- Civic Leagues
- Base/Tip Representative

**Departments:**

- Communications
- Marketing
- Operations
- Customer Service

**Internal Communications Plan**

**Goal:** The goal of the Internal Communications Specialist is to effectively promote the launching of HRT's new premium service, The MAX, to all HRT employees. Effective promotion will increase knowledge and awareness among HRT employees so that they are in turn able to effectively communicate to the external publics.

**Objective:** The Internal Communications Specialist aims to create excitement among the employees about the new service, as well as educate them about the logistics of this new service.

**Target Audiences:**

- All bus operators, transportation supervisors, and dispatch.
- All admin staff
- All upper management officials

**Key Messages:**

- The MAX is a premium service and should be held to the highest customer service standard. The commute for this service should be less stressful (direct/express service), more enjoyable, comfortable (high plush back seats and additional leg room), and convenient (Wi-fi Internet connections).
- We are targeting riders who haven't necessarily used public transportation previously.
- Fare and route information will be highlighted.

**Materials:**

- Flyer that will advertise open house event
- A MAX giveaway
- FAQ sheet and other supporting literature
- Advertisement in the LINK newsletter
- Advertisement on the InSite intranet site
- E-mail blasts to all staff
- Payroll stuffers (?)

#### **Activities:**

- A “Who’s MAX?” campaign will be launched the week of April 28-May2. This campaign will include flyers, posters and other advertisements that will be posted around HRT’s various facilities, driving people to events that will be held May 5-7.
- A MAX bus will be on static display at a different facility each day. Employees will be encouraged to board the MAX bus and obtain information about the new service, receive a giveaway as well as have the opportunity to ask questions and receive answers. The flyers will ask “Who’s MAX?” “Where’s MAX?” and “When does MAX arrive?” In addition to the questions being asked, a cartoon figure named MAX will appear on the flyers

#### **Communication Channels:**

- Flyers
- E-mail
- Newsletter
- Intranet

#### **Coalition Partners:**

- All Public Affairs and Communications Departments



# **Transit Riders Advisory Committee Guidelines**

## **August 2009**

### **I. Purpose of TRAC:**

The Hampton Roads Transit (HRT) Transit Rider Advisory Committee (TRAC) is a subcommittee under the Transportation District Commission of Hampton Roads (TDCHR) Executive Committee and is operated by citizens on a voluntary basis. Its purpose includes but is not limited to the following objectives:

- A. Provide HRT administration with feedback and recommendations for improving operational or service issues affecting HRT customers
- B. Provide input into HRT's customer outreach activities
- C. Provide HRT customers and the community at-large with information about HRT services and soliciting input concerning service improvements

### **II. TRAC Membership:**

- A. TRAC may be comprised of up to 14 voting members, which shall include at least one resident from each city and one service representative.
- B. Members, should include (but not be limited to) HRT customers and persons who currently utilize or have the desire to utilize public transportation.
- C. Members are appointed by the TDCHR Executive Committee Chairperson upon recommendation by HRT staff and/or the Commissioner(s) of the represented city.
- D. The TRAC will report to the TDCHR Executive Committee at each regular meeting. A written report is prepared by the Recording Secretary and reviewed by the committee Chairperson and/or Vice-Chairperson and HRT staff to be submitted to the TDCHR Executive Committee Chairperson prior to presentation to the full TDCHR Commission meeting. The HRT staff will provide assistance as required to ensure that the report is prepared and placed on the TDCHR Executive Committee and TDCHR agendas.

#### **E. Term Length.**

Members may serve two-year terms unless removed for cause as stated below. They may be reappointed by the TDCHR Executive Committee Chairperson for additional terms as recommended by the Commissioner(s) of the represented city.

#### **F. TRAC Officer Roles and Terms**

TRAC shall have an executive board consisting of the Chairperson, Vice-Chairperson and Recording Secretary.

- The Chairperson and Vice Chairperson are appointed by the TDCHR Executive Committee Chairperson. They shall serve one-year terms; and they may be reappointed once at the discretion of

The TRAC Committee Chairperson Responsibilities –

- Plan and chair all TRAC meetings.
- Report to the TDCHR Executive Committee Chairperson
- Represent the TRAC advisory committee as a spokesperson
- Execute TRAC decisions.

- Additional functions as requested by the TDCHR Executive Committee Chairperson.

The Recording Secretary is elected by TRAC members for a one-year term to coincide with his/her committee membership, The Secretary may be re-elected once at the end of his or her term at the discretion of the TRAC.

- Responsibilities –
  - Sending TRAC meeting notices,
  - Maintaining TRAC member contact information,
  - Taking attendance, and recording minutes at all TRAC meetings.
  - Writing reports to be submitted to the TDCHR Executive Committee Chairperson.
  - Additional functions as requested by the TRAC Chair or Vice-Chairperson.

### III. **TRAC Meeting Information**

- A. **Time:** The TRAC will meet a minimum of bi-monthly and no more than once a month and will alternate meeting locations between the Southside and Peninsula. Any changes in meeting dates will be made after discussion and approval between the TRAC Chairperson and/or Vice Chairperson and HRT staff. Committee members shall be informed of any meeting changes as soon as possible
- B. **Notices:** Meeting notice reminders shall be sent to the TRAC committee and prospective committee members no later than 2 weeks prior to the next scheduled TRAC meeting. An Agenda, and minutes of the previous meeting shall also be attached to the upcoming meeting notice. Copies will also be available as needed in Braille or audiotape for the visually and hearing impaired.
- C. **Minutes:** Minutes of the previous meeting and a status report of responses to questions shall be sent to TRAC committee members via electronic means or via postal service if that member does not have the capability to receive electronic mail no later than 14 days after the meeting.
- D. **Transport Passes:** No more than 10 MAX day passes will be distributed to all members for attending the formal TRAC meetings as needed. These passes will be issued to each member in attendance at the meeting.  
In addition, those individuals requiring Handi-Ride transportation may receive Handi-Ride tickets for transportation to and from the formal TRAC meetings.
- **Records.** Comments and questions submitted by the TRAC at scheduled committee meetings shall be recorded and investigated by HRT staff. Responses shall be formally responded to in writing as well as reported on at the subsequent TRAC meeting.

### IV. **TRAC Staffing & Communication Procedure**

- A. Support for the TRAC will come from the Public Affairs and Communications department of HRT. Staff from other HRT departments such as Operations and Planning will also participate in TRAC meetings. All minutes and notes of the

proceedings will be recorded by the TRAC Recording Secretary and distributed to HRT by the staff liaison.

- B. TRAC members will communicate with HRT through the TRAC assigned staff liaison only.
- C. TRAC members will not speak or act on behalf of HRT unless authorized by HRT Senior Executive Staff or Vice President of Public Affairs and Communications. Failure to have authorization will result in immediate dismissal from the TRAC committee.

## **V. TRAC Code of Conduct & Conflict of Interest**

### **A. Code of Conduct**

It is HRT's intention to take a constructive approach to inappropriate conduct matters. Where appropriate, HRT will endeavor to counsel a TRAC committee member to correct any conduct problems. However, HRT may find it necessary to impose immediate disciplinary action, up to and including removal from the committee without prior notice or counseling, for certain flagrant and egregious acts, violations of law and/or policy.

So that committee members are aware of their responsibilities to HRT and to their fellow committee members, the following list sets forth, by way of example and without limitation, conduct which may result in disciplinary action up to and including removal from the committee.

Committee members will ascribe to the following:

1. Regularly attend committee meetings
2. Thoughtfully prepare for and participate in discussions
3. Vote independently
4. Respect all individuals and opinions
5. Conduct business in a professional and ethical manner
6. Avoid self-interest or self-dealing
7. No conduct contrary to HRT's harassment policy, including verbal or physical conduct constituting sexual or other prohibited harassment;
8. No dishonest or fraudulent conduct, including but not limited to fraud, theft, misappropriation of, or unauthorized removal of the HRT's, or fellow committee member's funds or property;
9. No falsification of HRT's business records or documents.
10. No violation of HRT's substance abuse policy;
11. No physical violence or threats of violence, or insulting, intimidating, coercive, abusive, or obscene language or gestures;
12. Do not demonstrate inability or unwillingness to cooperate with HRT staff or other committee members.

### **B. Removal/Dismissal.**

1. Non-attendance: TRAC members may be removed if absent from three or more meetings in a one-year period, unless arrangements have been made and approved by the TRAC Chairperson or the TDCHR Executive Committee Chairperson. A letter is sent to the TDCHR Executive Committee Chairperson informing him/her of any members who have

missed three or more meetings. A determination for TRAC committee removal will be made in consultation with the referring Commissioner.

2. Inappropriate conduct at meetings or while representing the TRAC may also be reason for removal. Inappropriate activity may include but is not limited to any violation of the code of conduct or conflict of interest listed in Section V of this document. Inappropriate activity shall be discussed between the Commissioner who recommended the member, and the TRAC Executive Board to recommend removal from the committee. Upon their agreement and a 2/3 majority vote of the TRAC, a letter shall be sent to the TDCHR Executive Committee Chairperson recommending removal of the offending committee member.

### **C. Conflict of Interest**

HRT firmly believes that no individual should benefit personally or professionally from decisions of the committee. Nor should they benefit from the activities of the organization at the expense of the greater good of HRT. Therefore, all committee members must disclose any conflicts of interest. Committee members that incur potential conflicts of interest must remove themselves from discussion and voting on the matter. The remaining members of the committee will determine how to manage the potential conflict.



## **HRT Fare Launch Marketing & Communications Plan**

**Project Name:** HRT New Fare Structure Launch

**Delivery Date:** October 6, 2008

**Objective:**

The objective is to develop a series of internal and external programs that will introduce Hampton Roads Transit's (HRT) new fare structure.

The programs will emphasize simplification, education, and promotion to increase target audience's awareness of the new fare structure. Effective communications will be utilized through a combination of strategic onsite promotions, print ads, internet advertising, and radio advertising.

**Goal:**

Develop a multi-media campaign designed to create awareness and promote HRT's new fare structure to target audiences including, HRT employees, customers and vendors.

**Campaign Theme**

"Simplify Your Ride!"

**Components of Program:**

- Awareness Flyer
- Interior Bus Advertisements / Cards
- Exterior Bus Advertisements / Cards
- Bus Rail Hangers- alternate use of Door hanger
- Posters for Shelters, Transfer and Service Centers
- Radio Promotion (to include PSA and Advertisements)
- Internet Advertising (PilotOnline.com, DailyPress.com, University websites, traffic/transportation sites, etc.)

**Target Audiences:**

- HRT Employees
- Passengers
- General Public
- Vendors

**Tone:**

The tone of the campaign will be positive, simple and informative. The target audiences will be advised of the changes to the HRT's existing fare structure. Achieved campaign goals will result in the positive perception that fare structure changes will not only save time but save money.

**Measurement:**

- Pre and post ridership numbers
- Pre and post campaign farecard purchases
- Pre and post campaign gohrt.com website hits
- Customer feedback regarding fare through CAF system

**External Communications Plan**

**Goal:** The Community Relations Specialist will effectively promote HRT's new fare structure by reinforcing marketing messages through customer interaction.

**Target Audiences:**

- Passengers
- General public

**Key Messages:**

- HRT's basic fare has not increased
- Introduce new farecards
- Minimize confusion about eliminated fares
- Promote convenience of passes
- Highlight benefits of new day passes

**Communication Channels:**

- Informational Flyer
- Ferry Informational Flyer
- Posters
- Press Releases/Press Kits
- Giveaways
- Fare snap shot card
- On Site promotion at transfer centers.

**Activities:**

- Awareness and informational flyers will be posted on website, passed out by customer service representatives, and placed on buses.
- Decal posters will be posted inside all HRT shelters, transfer and service centers. Decal poster information includes introduction of new farecards.
- The Community Relations Specialist will ride routes with the highest ridership handing out informational flyers and giveaways. Flyer information includes eliminated farecards and Go pass fare information.

- The Customer Advocate will ride the Ferry and handout informational flyers and giveaways.
- The Community Relations Specialist will spend one day the week prior to launch at each transfer location handing out flyers, answering questions and handing out giveaways.
- The Public Affairs Manager will pitch stories to media outlets.
- The Public Affairs Manager will send out press releases and coordinate all media inquiries.

**Departments:**

- Communications
- Marketing
- Operations
- Customer Service

**Marketing and Outreach Schedule:**

<b>Activity</b>	<b>Date</b>
Awareness Flyer	Week of September 2
Bus riding promotion	Week of September 15 & 22
Informational Flyer Distribution	Week of September 15 & 22
Interior & Exterior bus card	Week of September 15
Bus shelter poster posting	Week of September 15
Bus window decal	Week of September 15
Fare box decal	Week of September 15
Media Notification	Week of September 22
Print Ads	September 22-Nov 1
Bus rail hanger	Week of September 22, 29 & 10/6
Radio Sponsorships/Ads	September 22- Nov 1
Transfer center promotion	Week of September 29
Press Release	Week of September 29

**Internal Communications Plan**

**Goal:** The goal of the Internal Communication Specialist is to effectively communicate the agency's fare structure changes to all HRT employees. Effective promotion will increase policy awareness among employees so that they are able to effectively communicate the changes to the external public.

**Target Audiences:**

- All bus operators, transportation supervisors, dispatch, and maintenance employees.
- All administrative staff

**Key Messages:**

- Introduction of new fare cards (day-pass, 2-ride cards).
- Eliminated fare cards (10-ride, 10-ride E&D).

- Revised versions of old fare cards (7-day, 30-day, Seasonal Shuttle).
- Listing of the fare cards valid on specified services.

**Materials:**

- Poster
- Fare Structure Chart
- Fare Card Chart
- Eliminated Fare Card Chart
- SOE Insert
- General Order

**Activities:**

- A poster displaying the new fare structure will be posted at all HRT facilities, in the break room for all employees to see.
- A poster displaying the eliminated fare cards will be posted at all HRT facilities, in the break room for all employees to see.
- An SOE insert will be distributed to all Union employees.
- Operators will be given informational packets to include the fare chart, farecard chart, eliminated farecard chart, SOE insert, and general order. The packets will be distributed to all employees.
- The internet site, goHRT.com, and the intranet site, the InSite will be updated with the new fare structure 30 days prior to implementation.
- An article will be placed in each issue of the LINK beginning August 15<sup>th</sup> until October 15<sup>th</sup> regarding the new fare structure.
- A summary memo of the fare changes will be sent home with the last September payroll.
- The Project Manager, Vice Project Manager, and the Communication Specialist will attend the Union meetings for the month of September:
  - Thursday, September 11, 2008 in Norfolk at 10 a.m. and 7 p.m.
  - Wednesday, September 17 2008 in Hampton at 9 a.m. and 7 p.m.
- Training of the operators will begin August 11, 2008.
- The week prior to launch, the Communication Specialist will hold an "Operator Appreciation" at each location on specified days and times. Refreshments and giveaways will be available for employees who attend. Additional educational material will also be available.
- Fare Launch Luncheons will be held for administrative employees.

Activity	Date	Time	Location
LINK Article	8/15 – 10/15	-	-
Training Begins	8/19	Various	All
Posters Erected	9/5	-	All



Websites Updated	9/8	-	-
Attend Union Meeting	9/11	10am, 7pm	Union Hall
Attend Union Meeting	9/17	9am, 7pm	HQ
Memo Sent w/ Payroll	9/26	-	-
Informational Packets Distributed	9/29 – 10-2	Various	All
Operator Appreciation	9/29	4am, 8am, 12pm	18 <sup>th</sup> Street
Operator Appreciation	9/29	4pm, 7pm	HQ
Operator Appreciation	9/30	5am, 8am, 12pm	HQ
Fare Launch Luncheon	9/30	12pm	HQ
Operator Appreciation	9/30	4pm, 7pm	18 <sup>th</sup> Street
Operator Appreciation	10/1	4am, 8am, 12pm	18 <sup>th</sup> Street
Operator Appreciation	10/1	4pm, 7pm	HQ
Operator Appreciation	10/2	4am, 8am, 12pm	HQ
Fare Launch Luncheon	10/2	12pm	15 <sup>th</sup> Street
Operator Appreciation	10/2	4pm, 7pm	18 <sup>th</sup> Street
SOE Insert Distributed	10/6	-	All

### Customer Service Training Plan

1. The week of August 18-August 29 each customer service representative will attend the operations training class listed below. The purpose of CSR attending the same training as the operators is to ensure that everyone receives the same message and to provide a different view on how the customers will be able to receive the data.

#### **Weekday Training Hours for SS**

8:00am – 10:30am

10:30am – 1:00pm

1:30pm – 4:00pm

4:00pm – 6:30pm

#### **Weekday Training Hours for NS**

9:00am – 11:30am

11:30am – 2pm

2pm – 4:30pm

4:30pm – 7:00pm

#### **Saturday Training Hours for NS&SS** – Offered at the SS Training Room

10:30am – 1:00pm

1:00pm – 3:30pm

#### **Sunday Training Hours for NS&SS** – Offered at the NS Training Room

11am – 1:30pm

1:00pm – 4:00pm

### The week of September 2 - September 19

CS management will break the CS team into small training groups and conduct fare card training using fare structure media as a tool.

#### Training Topics:

1. Fare Structure Overview
2. Role Play (Scenarios will be provide, customer view) (group critique)
3. Role Play Operators view
4. Customer Service Skills
5. Q & A Session
6. Training Assessment at the end of Training to document knowledge

### The Week of September 29, 2008

#### Larger Group Refresher Training

1. Review and evaluate Fare structure knowledge (live calls)
2. Coach strengths and weakness with CSR individually
3. Make recommendations

#### Customer Outreach

1. Updating Phone announcement
2. Provide Fare Structure hand out with each ticket purchase
3. Install Fare Structure Media at all transfer sites and buses

## Standard Operation Procedure for Public Participation Process

Public hearings are required by the Federal Transit Administration (FTA). The public hearing process provides for an open exchange of information and ideas between the public and the TDCHR.

### Purpose:

- To fulfill FTA requirements; including Triennial Review
- To establish guidelines to inform passengers of upcoming changes to routes and/or changes in fare structure.

### FTA Requirements

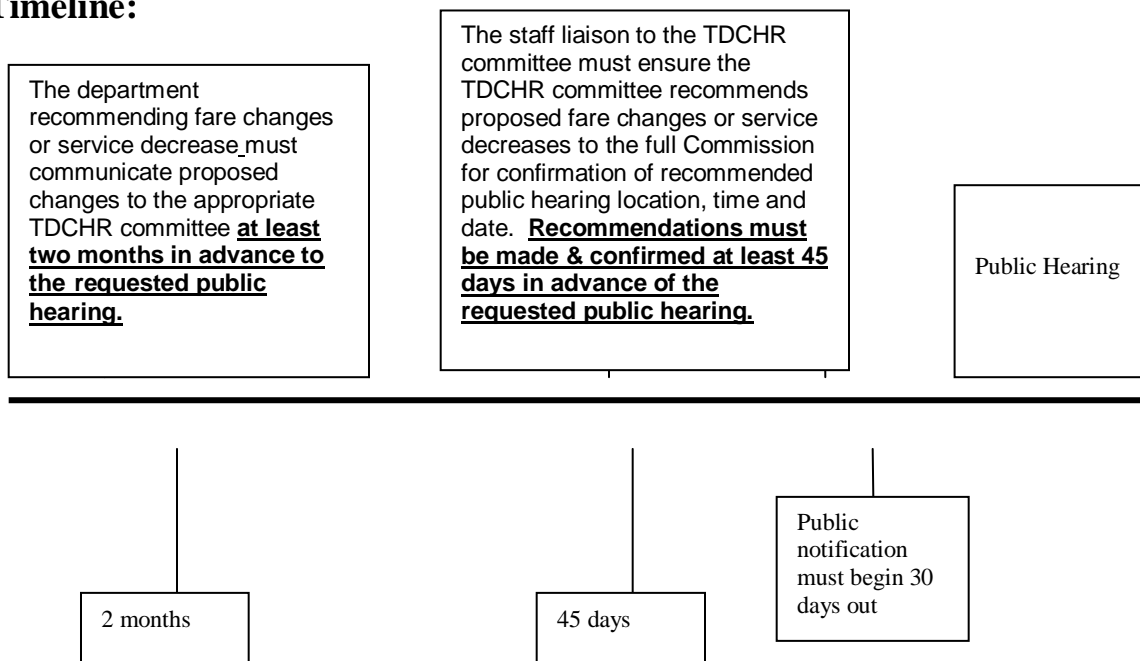
(Fare and service change regulations, contained in 49 CFR 635.7 & 635.9)

- The public hearing requirement only applies when grantees intend to increase the basic fare structure or decrease service. The law does not require that fare decreases, service increases, or “special fares” be preceded by public comment.
- For service decreases, the requirement only applies to “major service decreases.”

### Hampton Roads Transit (HRT) Threshold for “Major” Decreases

- Total elimination of a route.
- A service reduction of 25% or more of transit vehicle miles or 25% or more of service hours of a route.

### **Timeline:**



## **Public Hearing Checklist**

Date\_\_\_\_\_ Time\_\_\_\_\_ Location\_\_\_\_\_

Issue Owner \_\_\_\_\_ Communications Staff \_\_\_\_\_

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### **Issue Owner Responsibilities**

- Communicate proposed fare changes and/or service decrease to the appropriate TDCHR Committee at least two months in advanced of the requested public hearing. \_\_\_\_\_
- Prepare presiding Commissioner's public hearing request script. \_\_\_\_\_
- Ensure the TDCHR Committee recommends proposed changes to the full Commission for confirmation of the recommended public hearing location, time and date. \_\_\_\_\_ (Recommendations must be made and confirmed at least 45 days in advance of the requested public hearing. )
- Fill out Action Request Form \_\_\_\_\_
- Submit request for the public hearing to the Commission Secretary as an agenda item. \_\_\_\_\_
- Once time, date and location are confirmed by the TDCHR inform the Communications staff person at least 45 days in advance of the need for a public hearing. \_\_\_\_\_
- Provide Communications staff person with the completed Action Request form and information for the public to review. \_\_\_\_\_
- Send correspondence to city managers of the TDCHR member cities explaining the financial impacts of proposed route/and or fare adjustments. \_\_\_\_\_

### **Communications Staff Person Responsibilities**

- Advertise in newspapers at least 30 days in advance for 2 consecutive weeks. \_\_\_\_\_
- Notices on Website\_\_\_\_\_
- Notification placed at transfer centers, park & rides & administrative buildings\_\_\_\_\_
- Schedule Court Reporter \_\_\_\_\_
- Gather public hearing notice, information distributed to passengers, completed action request form, and correspondence forwarded to city managers for the Commission secretary to include in the TDCHR Commission packet. \_\_\_\_\_
- Verify the Commission Secretary has the public hearing request as an agenda item. \_\_\_\_\_
- Ensure internal communications distributes information internally\_\_\_\_\_
- Ensure customer service representatives have a script to address passengers.\_\_\_\_\_
- Serve as the point of contact for all customer inquiries regarding the hearing.\_\_\_\_\_
- Collect all written correspondence from public to be read and entered into the public hearing minutes and send to the Commission. \_\_\_\_\_
- Notices on City Cable channels (optional)\_\_\_\_\_
- Passengers Alerts (optional)\_\_\_\_\_
- Interior Bus Cards (optional)\_\_\_\_\_
- Interior Van Posters (optional)\_\_\_\_\_
- Counter Cards (Optional)\_\_\_\_\_
- Press Kit/Press Release\_\_\_\_\_
- Sign Language Interpreter\_\_\_\_\_
- Sign in sheets/pens\_\_\_\_\_
- Speaker cards/pens\_\_\_\_\_
- Prepared remarks for Hearing Officers\_\_\_\_\_
- Prepared remarks for staff\_\_\_\_\_

- Maps of route changes \_\_\_\_\_
- Easels for maps \_\_\_\_\_
- Flipcharts (as needed) \_\_\_\_\_
- AV equipment (as needed) \_\_\_\_\_
- Microphones – stationary & mobile (as needed)
- Handouts \_\_\_\_\_
- Set of existing route schedule brochures \_\_\_\_\_
- Comment cards/pens \_\_\_\_\_
- Seating set up – Building & Grounds contacted \_\_\_\_\_
- Parking needs – Security Manager contacted \_\_\_\_\_
- Directional signage as needed \_\_\_\_\_
  - Yard signs for exterior
  - Paper signs for interior
- Security needs – Security Manager contacted \_\_\_\_\_
- Pads of paper and pens for staff and Commission member note taking \_\_\_\_\_
- Staff members to be present to handle sign in, assisting disabled, passing microphone, answer questions, assist with comment cards, etc. \_\_\_\_\_

# **APPENDIX B**



3400 Victoria Boulevard, Hampton, Virginia 23661  
Phone: 757-222-6000 ~ Southside Fax: 757-222-6103  
Peninsula Fax: 757-222-6195 ~ [www.hrtransit.org](http://www.hrtransit.org)

***HAMPTON ROADS TRANSIT:***

**Limited English Proficiency Plan**

**December 2010**



## **INTRODUCTION**

A Limited English Proficiency person is one who does not speak English as their primary language and who has a limited ability to read, speak, write, or understand English. The purpose of this Limited English Proficiency Plan is to outline the responsibilities of the Hampton Roads Transit (HRT) in regards to Limited English Proficient (LEP) persons and establish a process for providing assistance to LEP persons for HRT programs, activities, and services pursuant to Title VI of the Civil Rights Act of 1964 and Executive Order 13166.

### **Title VI of the Civil Rights Act of 1964**

*"No person in the United States shall, on the ground of race, color, or national origin be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance."*

### **Executive Order 13166**

Different treatment based upon a person's inability to speak, read, write, or understand English may be a type of national origin discrimination. Executive Order 13166 *"Improving Access to Services for Persons With Limited English Proficiency,"* directs each Federal agency that is subject to the requirements of Title VI of the Civil Rights Act of 1964 to publish guidance for its respective recipients and sub-recipients clarifying that obligation. The U.S. Department of Transportation (USDOT) published policy guidance on December 14, 2005 to clarify the responsibilities of recipients of Federal financial assistance from the USDOT.

### **Plan Methodology**

HRT has developed this Limited English Proficiency Plan (LEP) to provide language assistance for LEP persons seeking meaningful access to HRT programs as required by Executive Order 13166, USDOT, and FTA's policy guidance. In developing the HRT LEP Plan, the HRT staff undertook a USDOT Four-Factor LEP analysis, which requires the following considerations:

1. The number or proportion of LEP persons eligible to be served or likely to be encountered by HRT programs, activities, or services.
2. The frequency with which LEP individuals come in contact with HRT programs, activities, or services;
3. The nature and importance of the program, activity or service provided by the HRT to the LEP population; and
4. The resources available to the HRT and overall cost to provide LEP assistance.

## FOUR FACTOR ANALYSIS

### **FACTOR 1: Number or proportion of LEP persons eligible to be served or likely to encounter HRT programs, activities, or services.**

Hampton Roads Transit (HRT), incorporated on October 1, 1999, began through the voluntary merger of Pentran and Tidewater Regional Transit, the region's two existing public transit operators. HRT is governed by the Transportation District Commission of Hampton Roads (TDCHR), which is comprised of seventeen members, two appointed representatives from each city served, two General Assembly members, and a member representing the Commonwealth Transportation Board. The TDCHR was established in accordance with Chapter 45 of Title 15.2 of the Code of Virginia, as amended, referred to as the Transportation District Act of 1964 and by ordinances adopted by the governing bodies of its components governments. The purpose of the Commission is to provide reliable and efficient transportation services and facilities to the Hampton Roads community. Hampton Roads is located in southeastern Virginia. HRT serves the Southside and Peninsula areas of Hampton Roads, consisting of the cities of Hampton, Norfolk, Newport News, Portsmouth, Suffolk, Chesapeake, and Virginia Beach.

Using information tabulated by the Hampton Roads Regional Transportation Planning Organization (HRTPO) from the Summary File 3 of Census 2000 Data, Table 1 below shows the total populations by city five years and older, the population that only speak English five years and older, the population that speak other languages five years and older, and the population that do not speak English well or at all five years and older. It is this last group that comprises the LEP populations within HRT's member cities. As shown in the last column in Table 1, across HRT's seven member cities, the percentage of the population that does not speak English well or at all five years and over is less than one percent (0.90%).

**Table 1: LEP Population By City**

City	Population 5 years and over: Total	Population 5 years and over: Speak only English	Population 5 years and over: Speak other languages	Population 5 years and over: Does not speak English well or at all; Total	Percentage of Total Population 5 years and over: Does not speak English well or at all;
Chesapeake	185,025	174,633	10,392	1,238	0.67%
Hampton	137,303	128,122	9,181	1,048	0.76%
Newport News	165,897	152,149	13,748	1,666	1.00%
Norfolk	217,818	198,440	19,378	2,021	0.93%
Portsmouth	93,508	89,221	4,287	632	0.68%
Suffolk	59,081	56,713	2,368	258	0.44%
Virginia Beach	394,892	354,311	40,581	4,435	1.12%
Total	1,253,524	1,153,589	99,935	11,298	0.90%

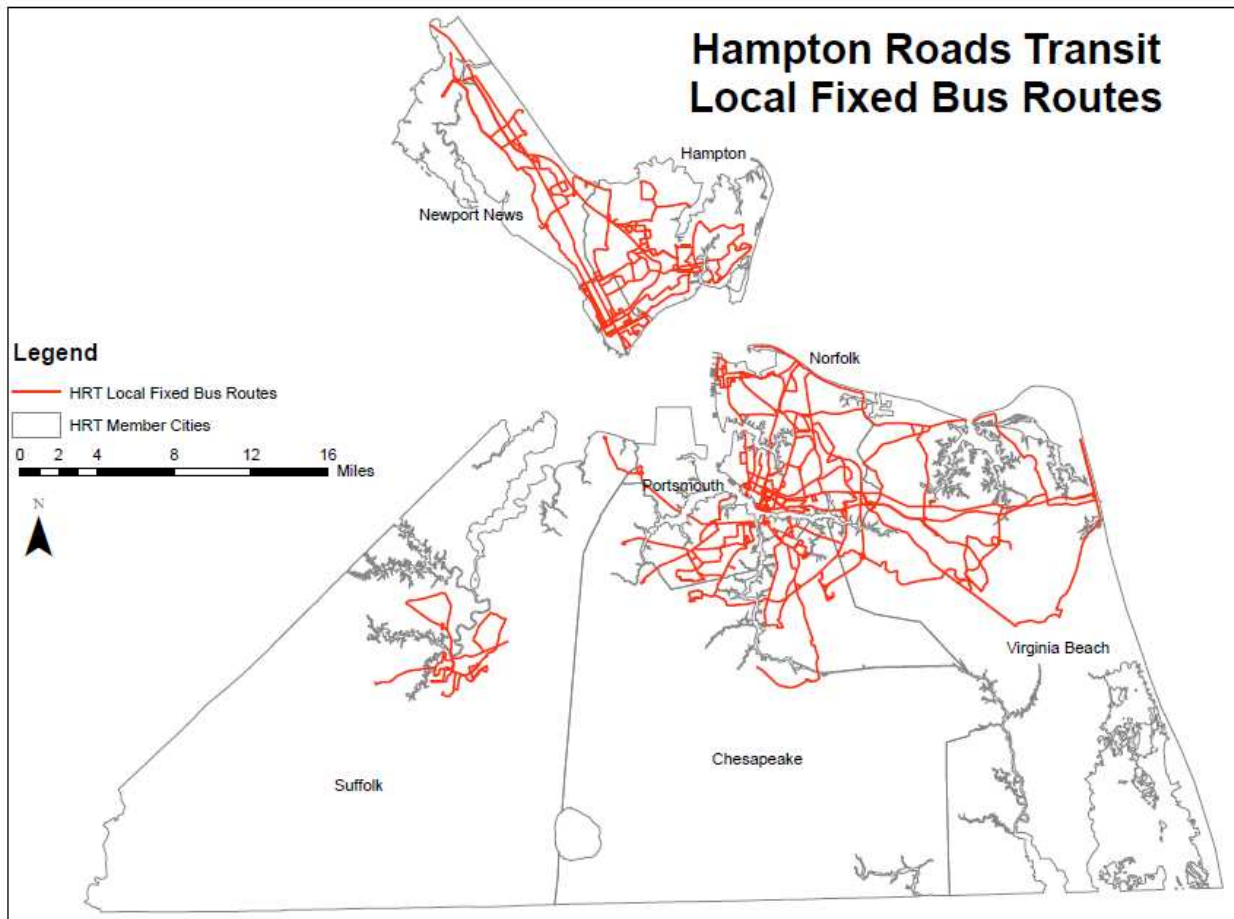
Table 2 below examines the languages spoken by the LEP population within each city. The majority of the LEP population speak Spanish. The next largest language group spoken by the LEP population is Asian and Pacific Island languages.

**Table 2: Populations Spoken by LEP Populations By City**

City	Population 5 years and over: Does not speak English well or at all; Spanish	Population 5 years and over: Does not speak English well or at all; Speaks Indo-European languages	Population 5 years and over: Does not speak English well or at all; Speaks Asian and Pacific Island languages	Population 5 years and over: Does not speak English well or at all; Speaks Other languages
Chesapeake	767	322	149	0
Hampton	439	184	368	57
Newport News	714	237	685	30
Norfolk	944	443	594	40
Portsmouth	353	188	58	33
Suffolk	141	75	42	0
Virginia Beach	1809	911	1612	103
	5167	2360	3508	263

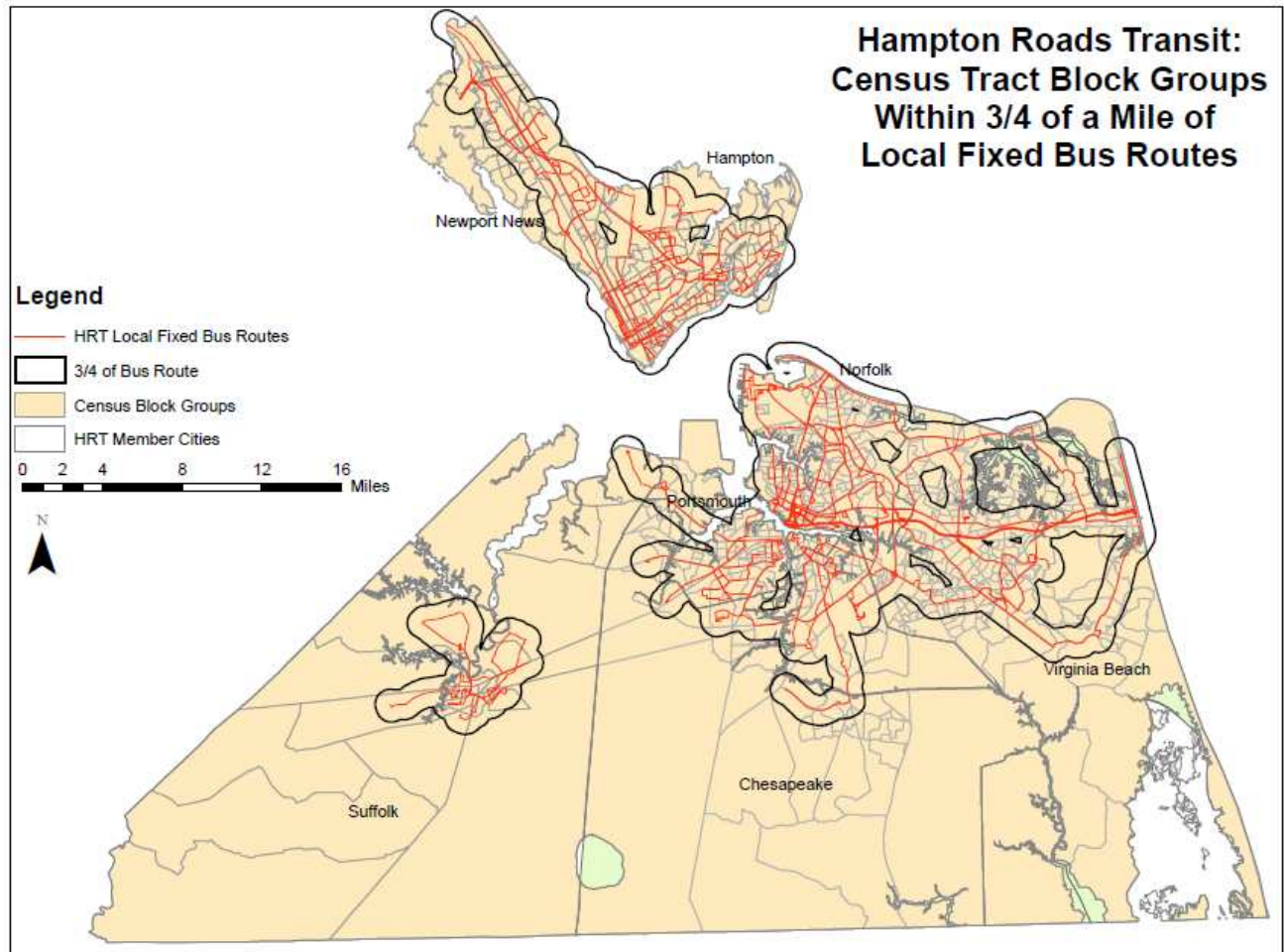
While this information is helpful to demonstrate the overall level of LEP population in HRT's member cities, it does not more specifically identify the language ability of those that live with  $\frac{3}{4}$  mile of HRT's fixed route local bus service. HRT's member cities cover a large geographic region, and bus service is not available within all areas. Figure 1 below shows the fixed route local bus service within the member cities.

**Figure 1: HRT's Local Fixed Bus Service**



In order to determine more specific percentages of LEP and their locations within closer proximity to HRT's local fixed bus routes, information for the census tract block groups with  $\frac{3}{4}$  mile of the local fixed bus routes were examined, as show in Figure 2.<sup>1</sup>

**Figure 2: Census Tract Block Groups Within  $\frac{3}{4}$  Mile of Local Fixed Bus Routes**



Source: US 2000 Census, Hampton Roads TPO, HRT. Made 12/9/2010.

To help identify potential languages within these general LEP language categorizations, the HRT staff consulted Census 2000 Special Tabulation 224 (STP 224): *Language Spoken at Home for the Population 5 Years and Over (2004)* for the census tract block groups included in the  $\frac{3}{4}$  mile service area of local fixed bus routes. This special tabulation provides a detailed language population count for unique languages spoken in counties across the United States. The languages spoken in census tract block groups within  $\frac{3}{4}$  mile of fixed local bus routes are shown below.

<sup>1</sup> If a portion of a block group is included in the  $\frac{3}{4}$  mile service area boundaries, the data analyzed includes all of the data from that block group, not just the geographic portion included in the  $\frac{3}{4}$  mile buffer.

**Table 3: Language Spoken at Home for the Population 5 Years and Over in Census Tract Block Groups within 3/4 mile of Fixed Local Bus Routes**

Language	Total Persons	Percentage
English Only	1,133,635	94.271%
Spanish	40,395	3.359%
Tagalog	12,585	1.047%
French	5,018	0.417%
German	4,570	0.380%
Korean	1,440	0.120%
Italian	1,010	0.084%
Vietnamese	795	0.066%
Japanese	715	0.059%
Chinese	690	0.057%
Greek	685	0.057%
Arabic	305	0.025%
Russian	200	0.017%
French Creole	85	0.007%
Polish	80	0.007%
Gujarathi	70	0.006%
Kru Ibo Yoruba	60	0.005%
Thai	35	0.003%
Portuguese	30	0.002%
Formosan	30	0.002%
Mon-Khmer, Cambodian	30	0.002%
Persian	25	0.002%
Hindi	20	0.002%
Amharic	20	0.002%
<b>TOTAL</b>	<b>1,202,528</b>	<b>100.00%</b>

Table 3 shows demonstrate that over 94% of the population within ¾ mile of fixed local bus routes speaks only English. It also provides a framework for HRT when for further analyzing which language groups would provide the most benefit for potential user groups when examining languages other than English to focus efforts. Spanish (at 3.359%) and Tagalog (at 1.047%) are the only two languages spoken at home by one more than one percent of the population within ¾ mile of HRT's fixed local bus routes.

The following maps identify, for Spanish and Tagalog, the percentages of persons per census tract block group that speak Spanish and Tagalog at home within the HRT member cities, as well as within the ¾ of a mile of local fixed bus service. While this information does not reflect that these percentages do not speak English as well, it does demonstrate the areas where particular service adjustments are more likely to impact populations that speak languages other than/or in addition to English.



Figure 3: Percentage of Population Per Block Group Speaking Spanish at Home

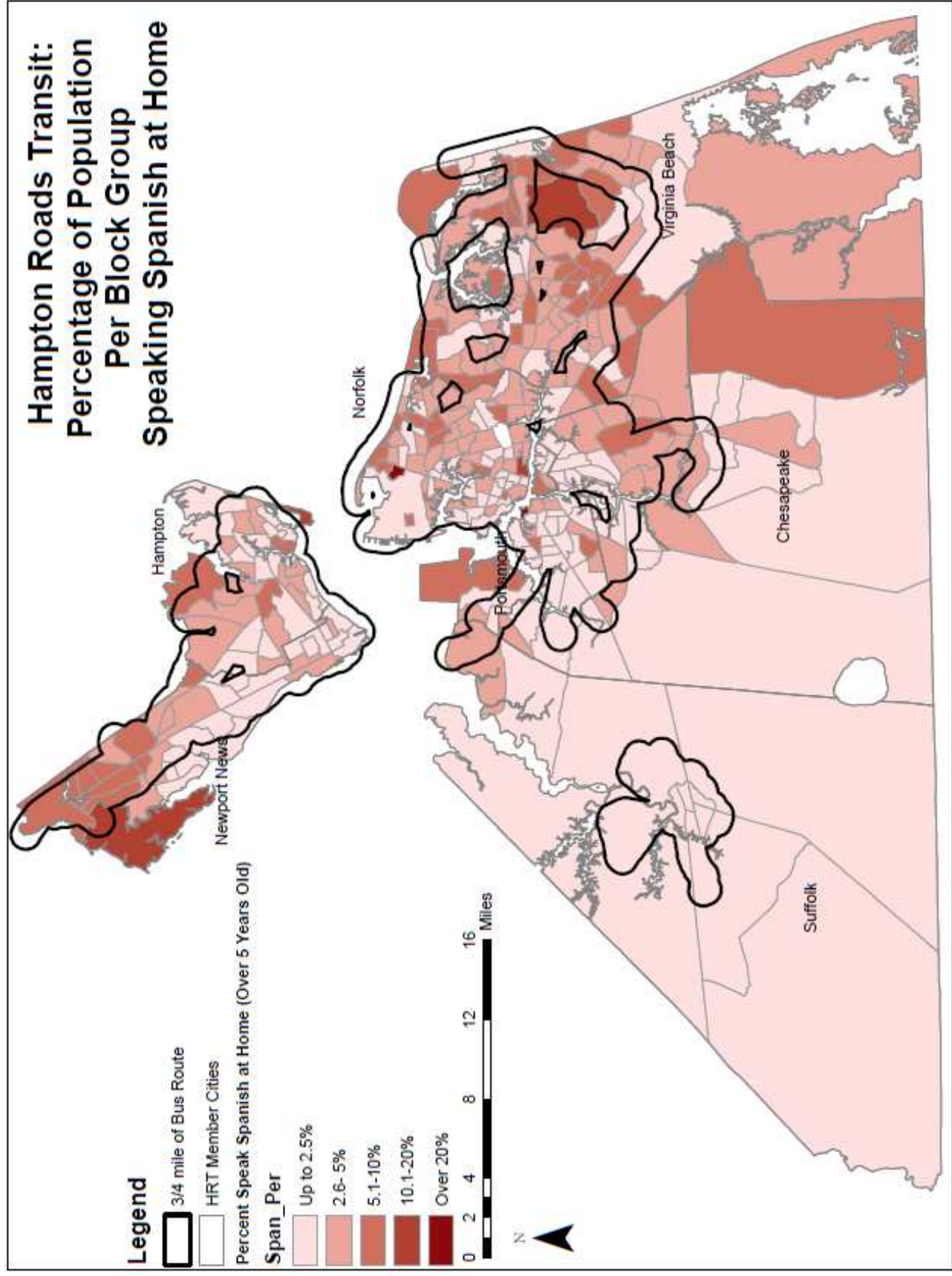
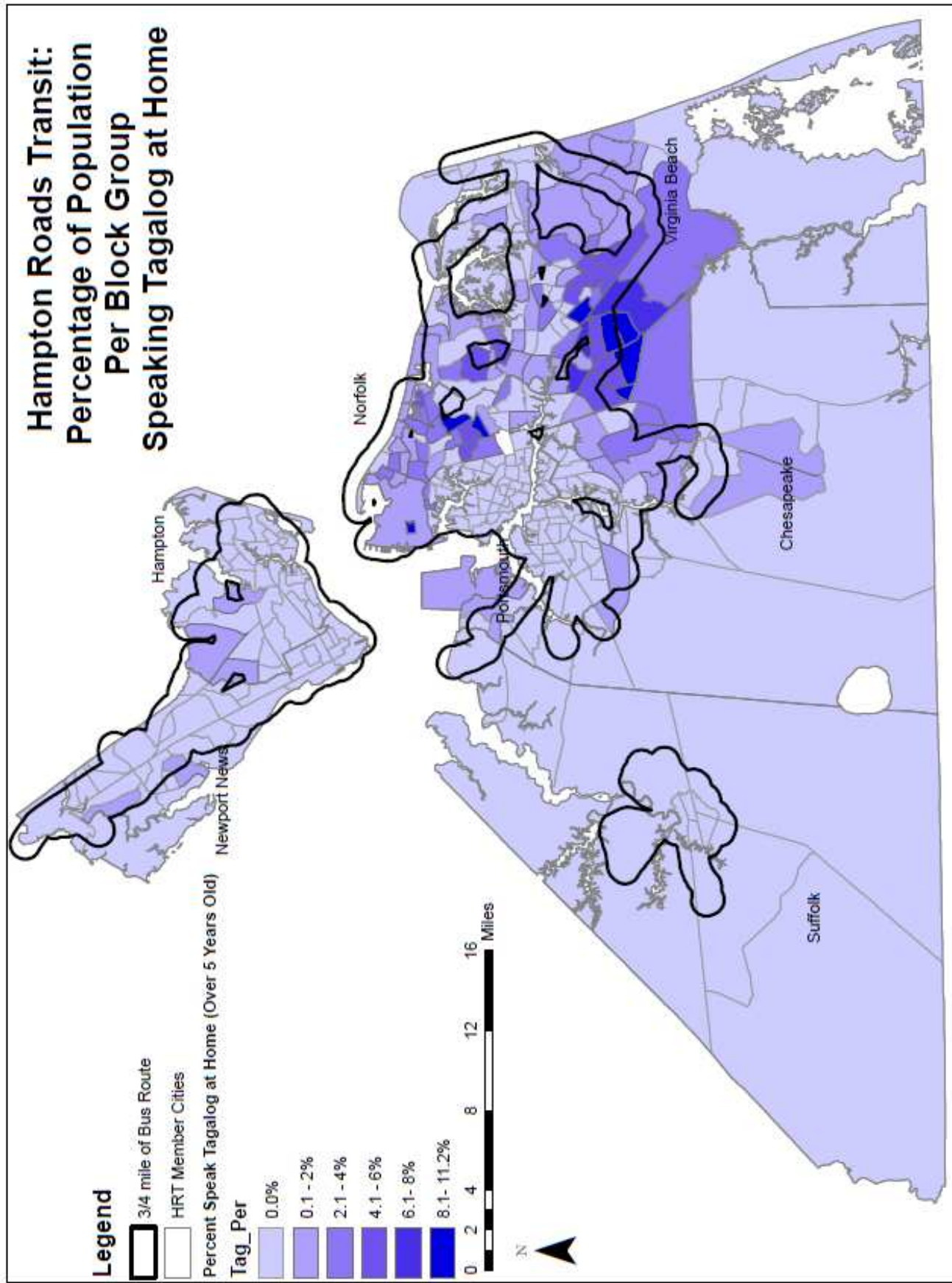


Figure 4: Percentage of Population Per Block Group Speaking Tagalog at Home



Source: Census 2000 Special Tabulation 224 (STP 224): Language Spoken at Home for the Population 5 Years and Over (2004), Table 742/Total Population;

**FACTOR 2: Frequency with which LEP individuals come in contact with HRT programs, activities, or services.**

HRT's customer service department reports that 5-7 calls from LEP speakers are received on an annual basis. The calls are from Spanish speakers. In the past, members of HRT customer service staff have made presentations to groups and agencies with populations that primarily speak Spanish.

**FACTOR 3: Nature and importance of the program, activity or service provided by the HRT to the LEP population.**

The transit services HRT provides are a fundamental service for passengers. A 2008 survey of passengers found that almost  $\frac{3}{4}$  of riders use bus services to travel to or from work or school.

**FACTOR 4: Resources available to the HRT and overall costs to provide LEP assistance.**

- HRT's current Customer Service Advocate and one other customer service agent speak Spanish. Two customer service agents speak Tagalog.
- Available materials to identify an LEP Person Needing Language Assistance:
  - Census Bureau's "*I Speak Cards*" at workshop or conference sign-in sheet table, and HRT's reception area. While staff may not be able to provide translation assistance at this meeting, the cards are an excellent tool to identify language needs.

As a part of the development of this plan, individuals from HRT's public involvement staff, customer service department, and development department discussed options that may be available to provide LEP assistance. The following methods were identified:

- Identify an LEP coordinator and examine possibility of establishing a Title VI/LEP group that could meet quarterly to review LEP/Title VI needs and activities.
- Coordinate with HRT operations staff to better identify LEP-related activity on-board the buses and impact on drivers, if any.
- Document LEP requests—both customer service calls and outreach activities.
- Calls to HRT's customer service center do not include a "For Spanish, press..." option. Monitor requests/calls to customer service to see if this is a need and coordinate with IT department to identify if this is a possibility.
- Coordinate with the HRTPO in their efforts to establish a *Hampton Roads Limited English Proficiency (LEP) Employee Guide* and a database of community groups and local agencies that work with LEP populations and identify volunteer translators and interpreters.
- Post a notice of available language assistance in HRT's reception area and website.
- Examine possibility of adding an online language translation feature to HRT's website.
- Add a statement when running general public meeting notices: "The HRT will strive to provide reasonable accommodations and services for persons who require special



assistance to participate in this public involvement opportunity. *Para información en español, llame al (757).....*”

- Examine possibility of creating information in other languages, primarily in Spanish.
  - “How to Ride the Bus” that has important information (fares, policies) related to HRT’s service
  - Cards placed inside buses listing who to contact if information is needed in other languages (Spanish).
- Add questions in Spanish (and possibly Tagalog) to rider surveys to better gauge amount/frequency of LEP communities using HRT services.
- Conduct training/informational sessions with HRT customer service department regarding LEP and Title VI populations. Training topics will include:
  - Understanding Title VI of the Civil Rights Act of 1964 and LEP responsibilities.
  - LEP program responsibilities and obligations.
  - Language assistance services offered.
  - Use of LEP Language Assistance Cards (“*I Speak Cards*”).
  - Documentation of language assistance requests.

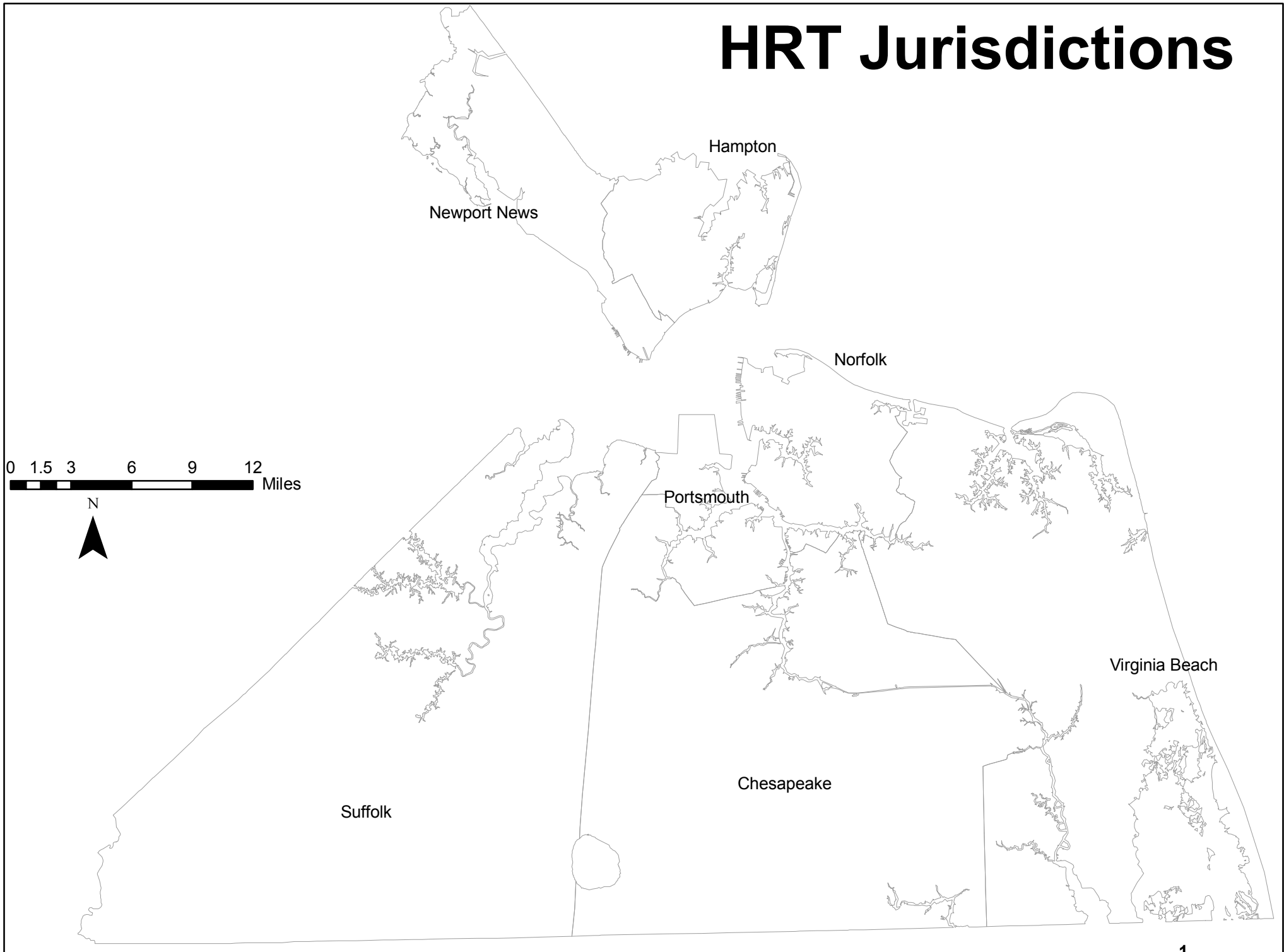
#### **MONITORING AND UPDATING THE LEP PLAN**

The following lists the implementation plan for this plan over the next calendar year:

- Document LEP requests and train customer staff accordingly.
- Update demographic analysis as data becomes available.
- Identify LEP coordinator and members of an LEP/Title VI committee with members from HRT’s Operations, Customer Service, Public Involvement, and Development departments. This committee will meet in the first quarter of 2011 to review the list of activities above and determine which can be implemented immediately, which should be further examined, and which require additional coordination. This committee will review this plan on an annual basis and update accordingly to identify if there a change in the languages where translation services are needed to monitor if available resources, such as technology, staff, and financial costs have changed.

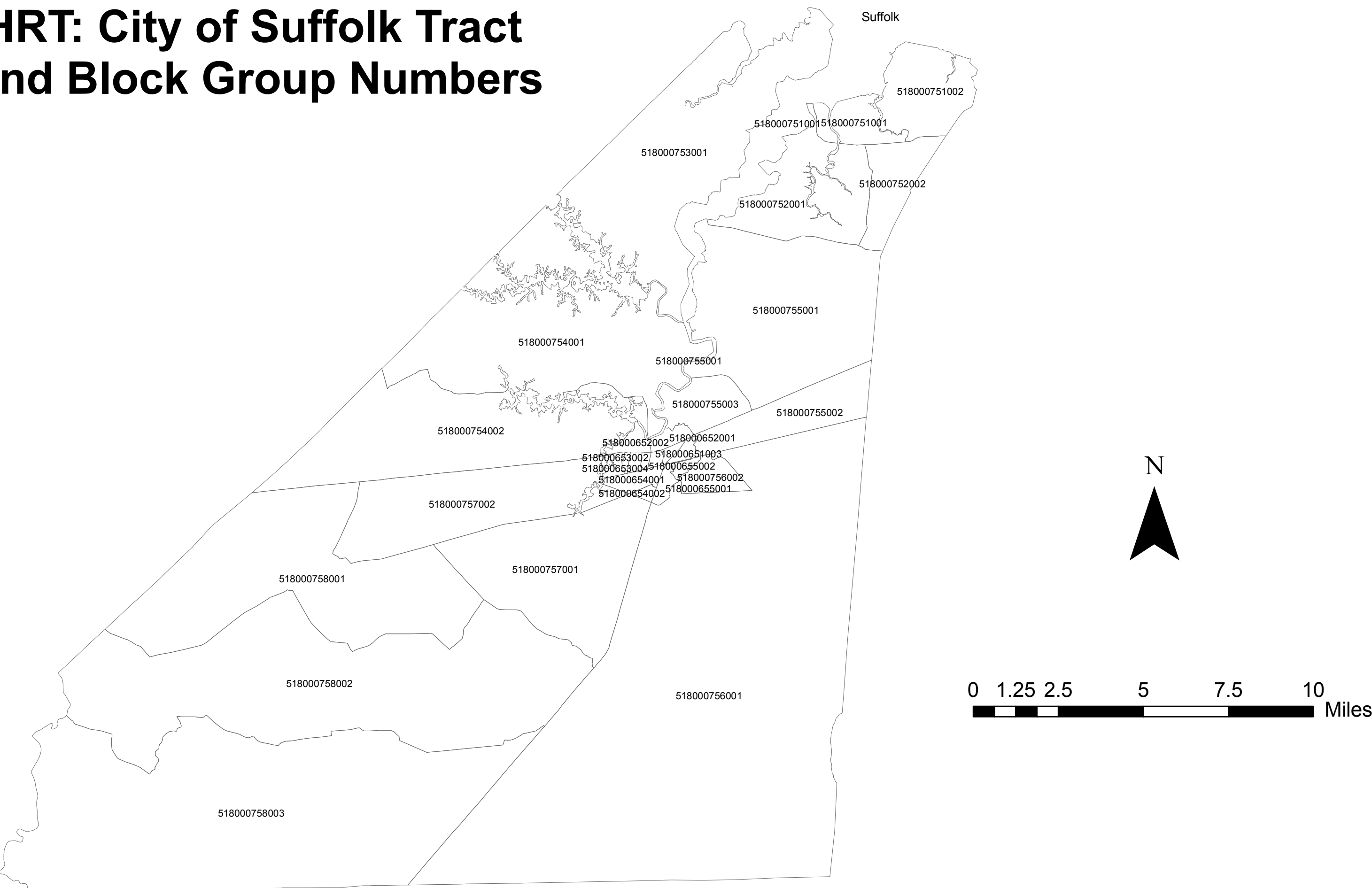
# APPENDIX C

# HRT Jurisdictions





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# HRT: City of Suffolk Tract and Block Group Numbers

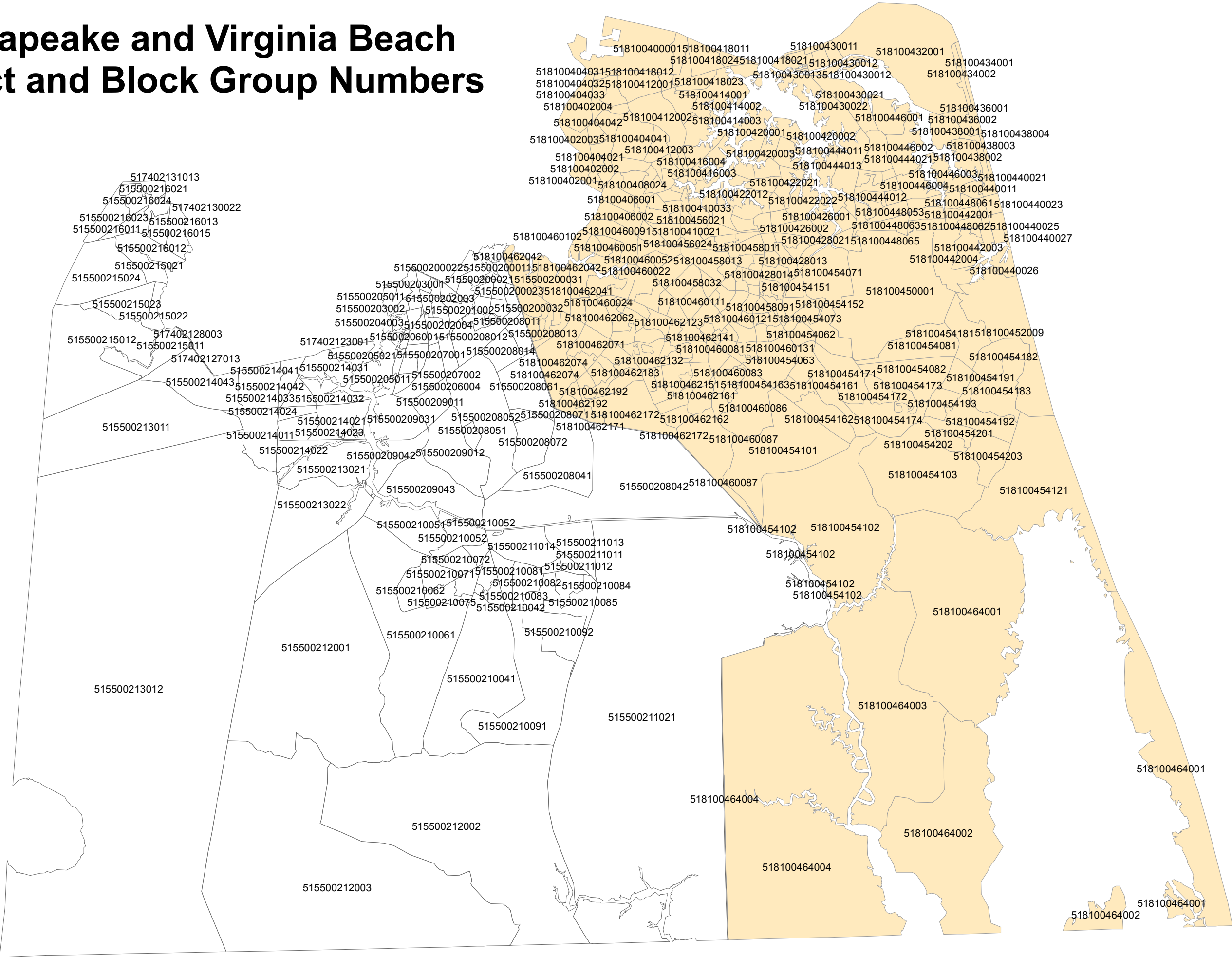


# HRT: Chesapeake and Virginia Beach Census Tract and Block Group Numbers

## Legend

-  City of Virginia Beach
-  City of Chesapeake

0 0.5 1 2 3 4  
 Miles

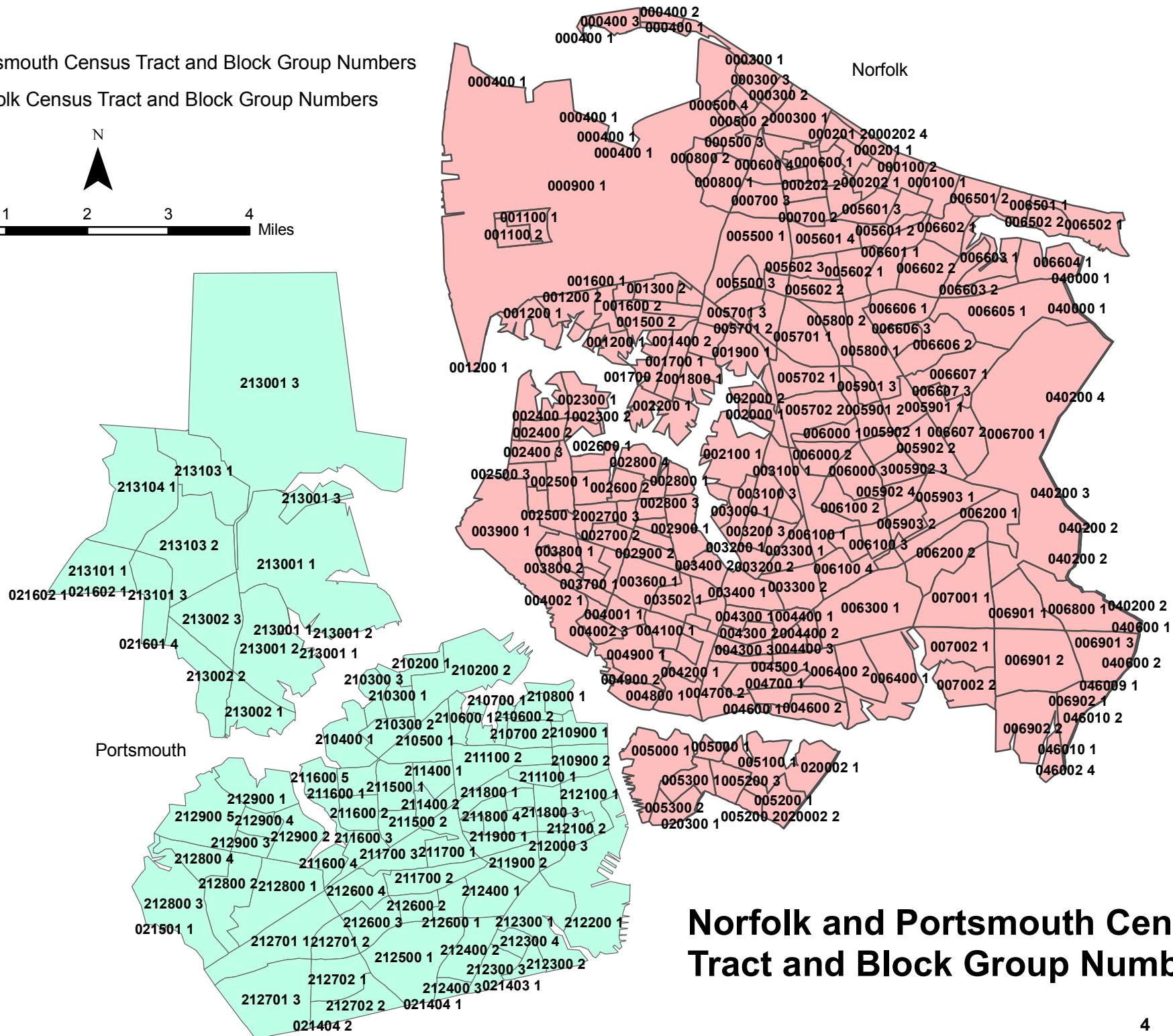


## Legend

- Portsmouth Census Tract and Block Group Numbers
- Norfolk Census Tract and Block Group Numbers

N

0 0.5 1 2 3 4 Miles



## Norfolk and Portsmouth Census Tract and Block Group Numbers

HRT: Census Tract and Census Block Numbers Hampton and Newport News

Newport News

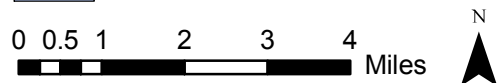
Hampton

Census Tract and Census Block Numbers

3 4 Miles

N

Census Tract and Census Block Numbers  
 Hampton  
 Newport News





# Title VI Analysis: Low-Income Population

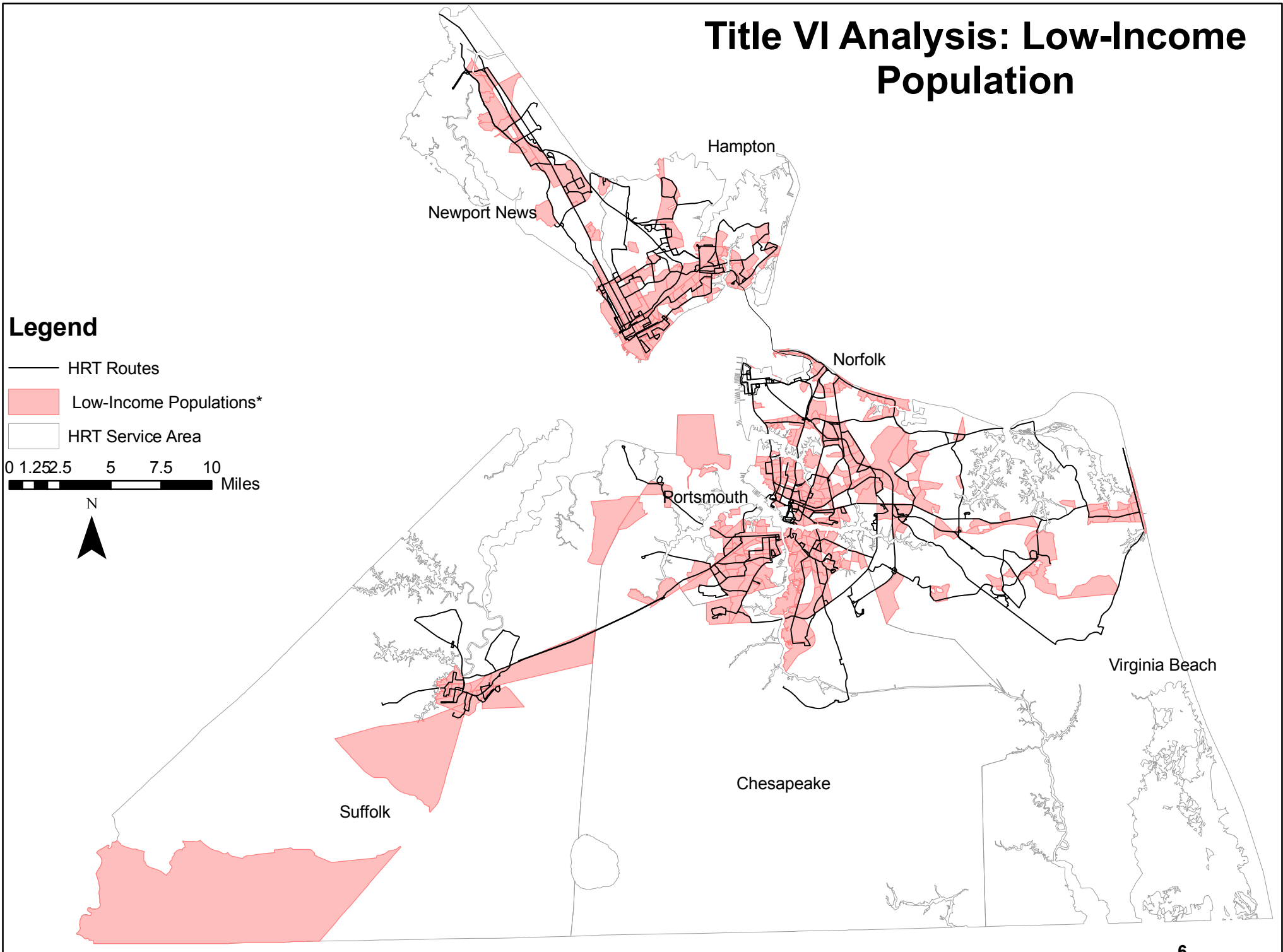
## Legend

— HRT Routes

Low-Income Populations\*

HRT Service Area

0 1.25 2.5 5 7.5 10 Miles



# Title VI Analysis: Minority Population

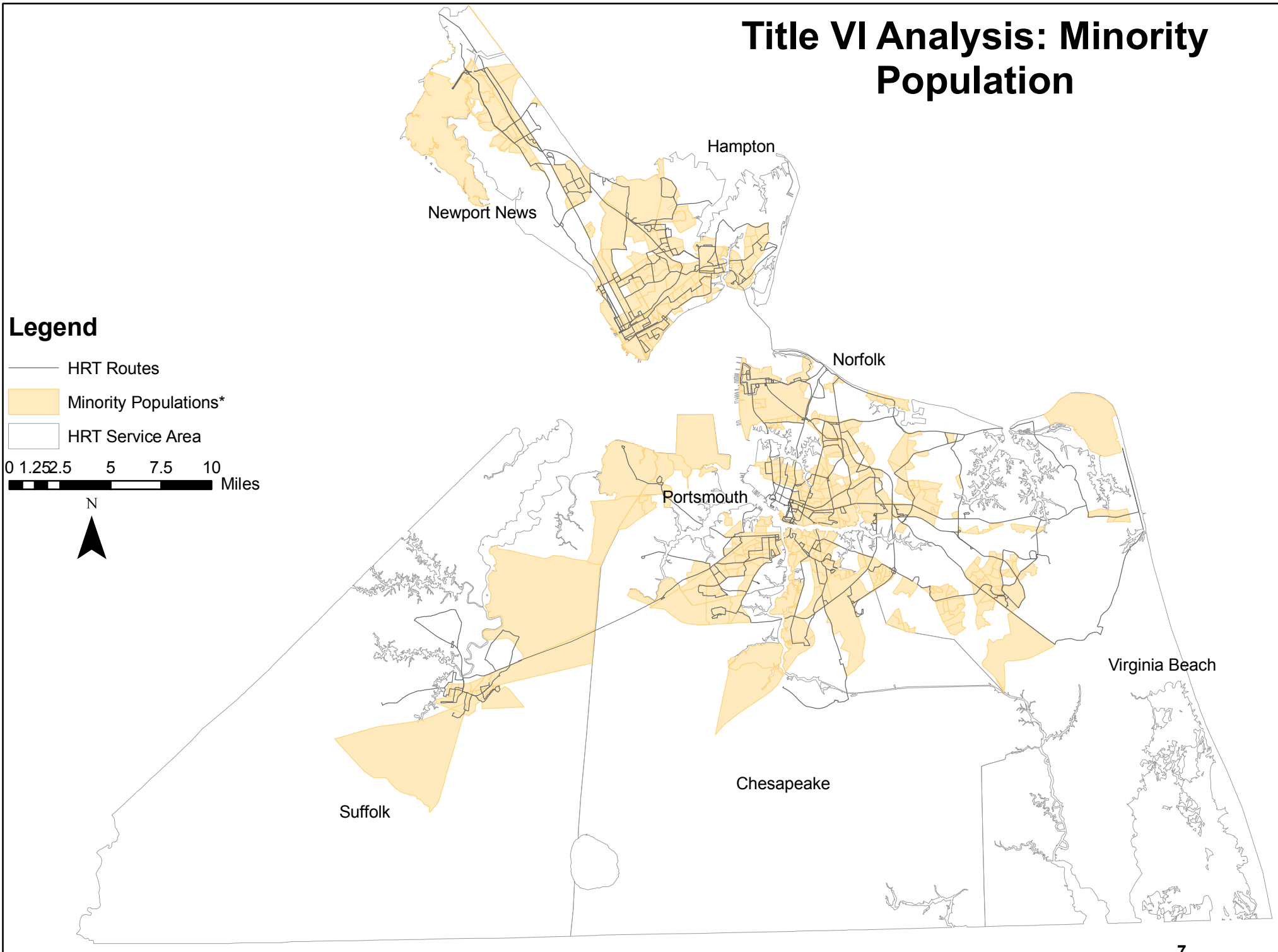
## Legend

— HRT Routes

Minority Populations\*

HRT Service Area

0 1.25 2.5 5 7.5 10 Miles



# Title VI Analysis: Title VI Populations

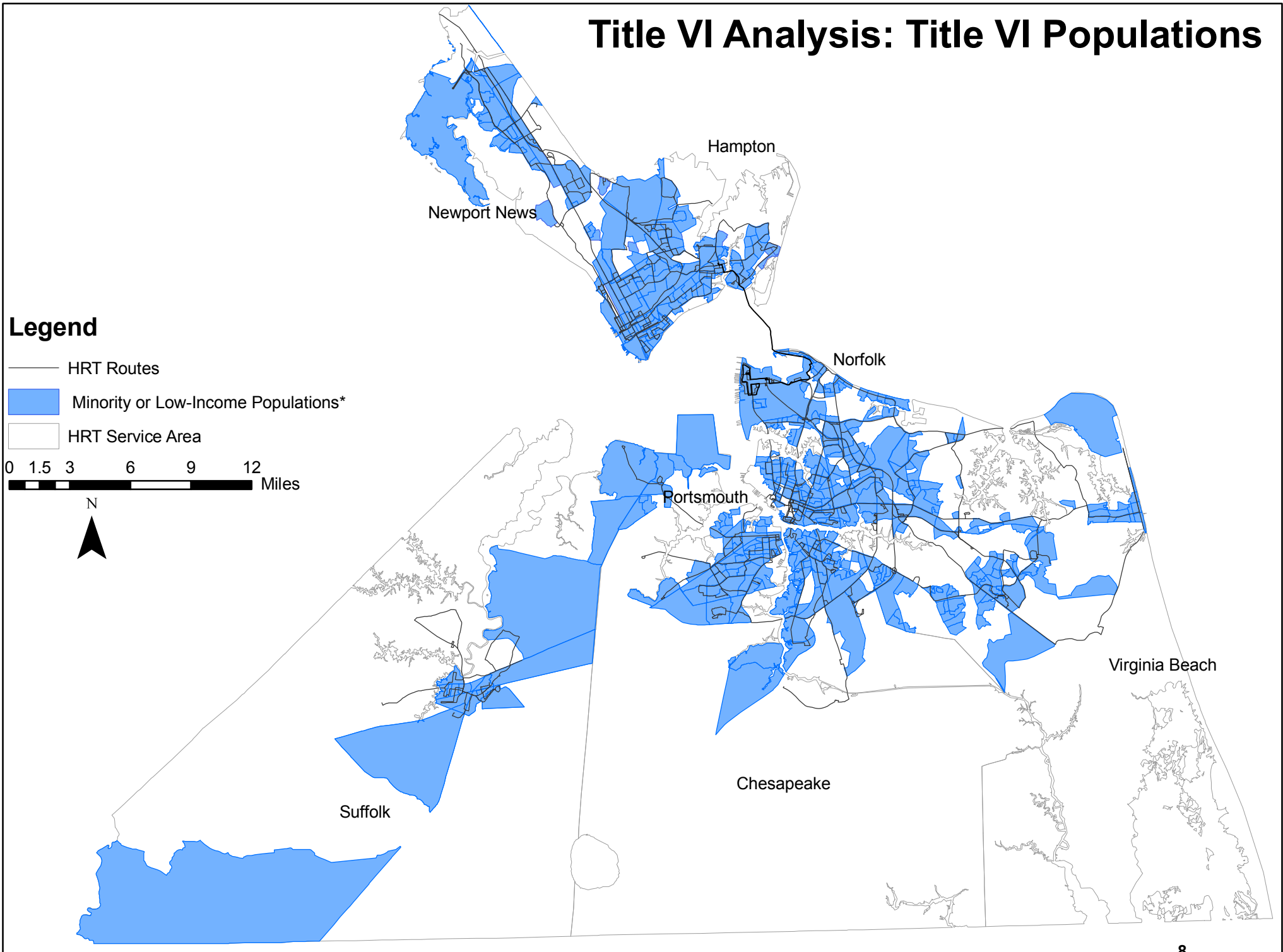
## Legend

— HRT Routes

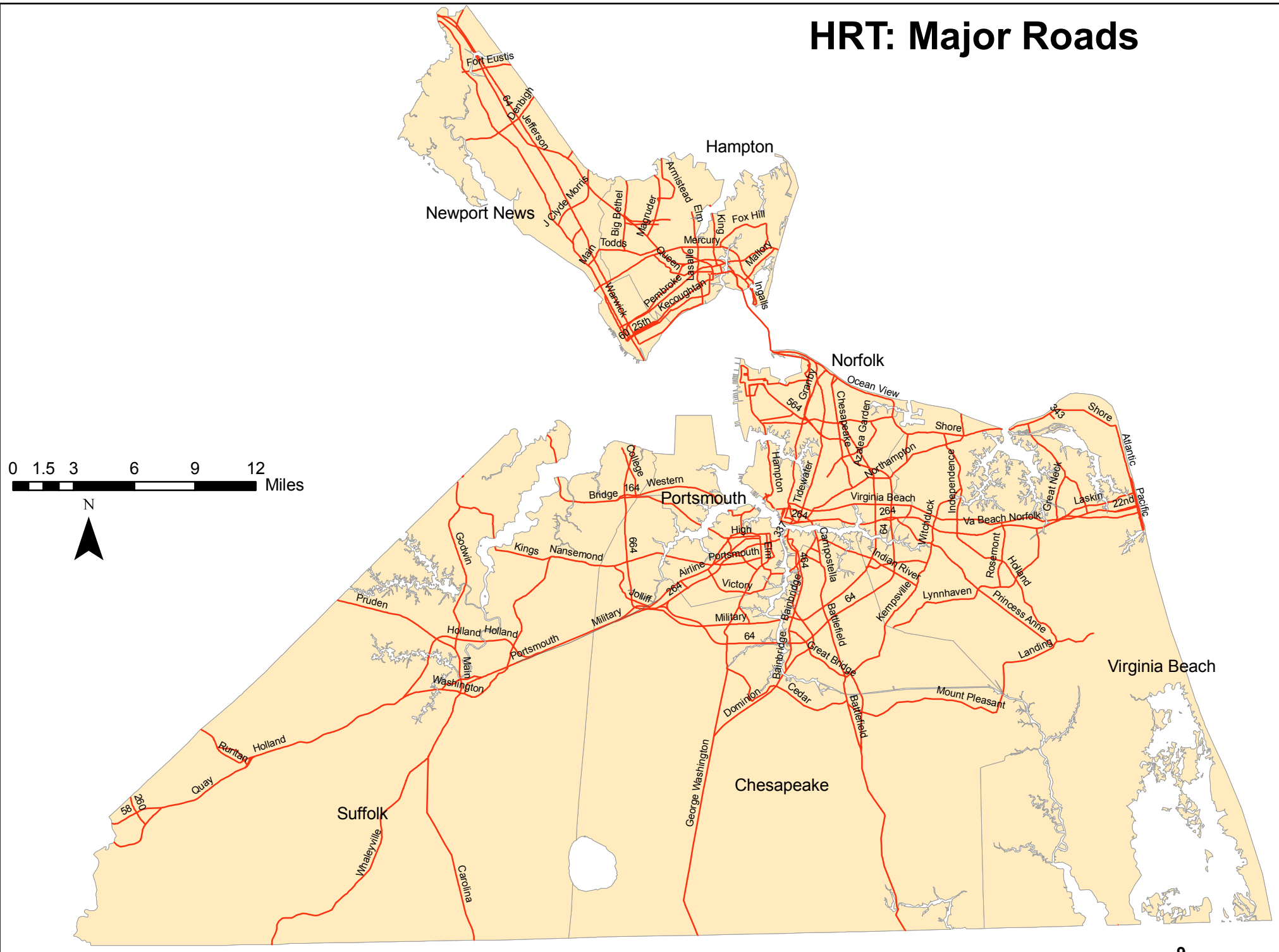
■ Minority or Low-Income Populations\*

□ HRT Service Area

0 1.5 3 6 9 12 Miles



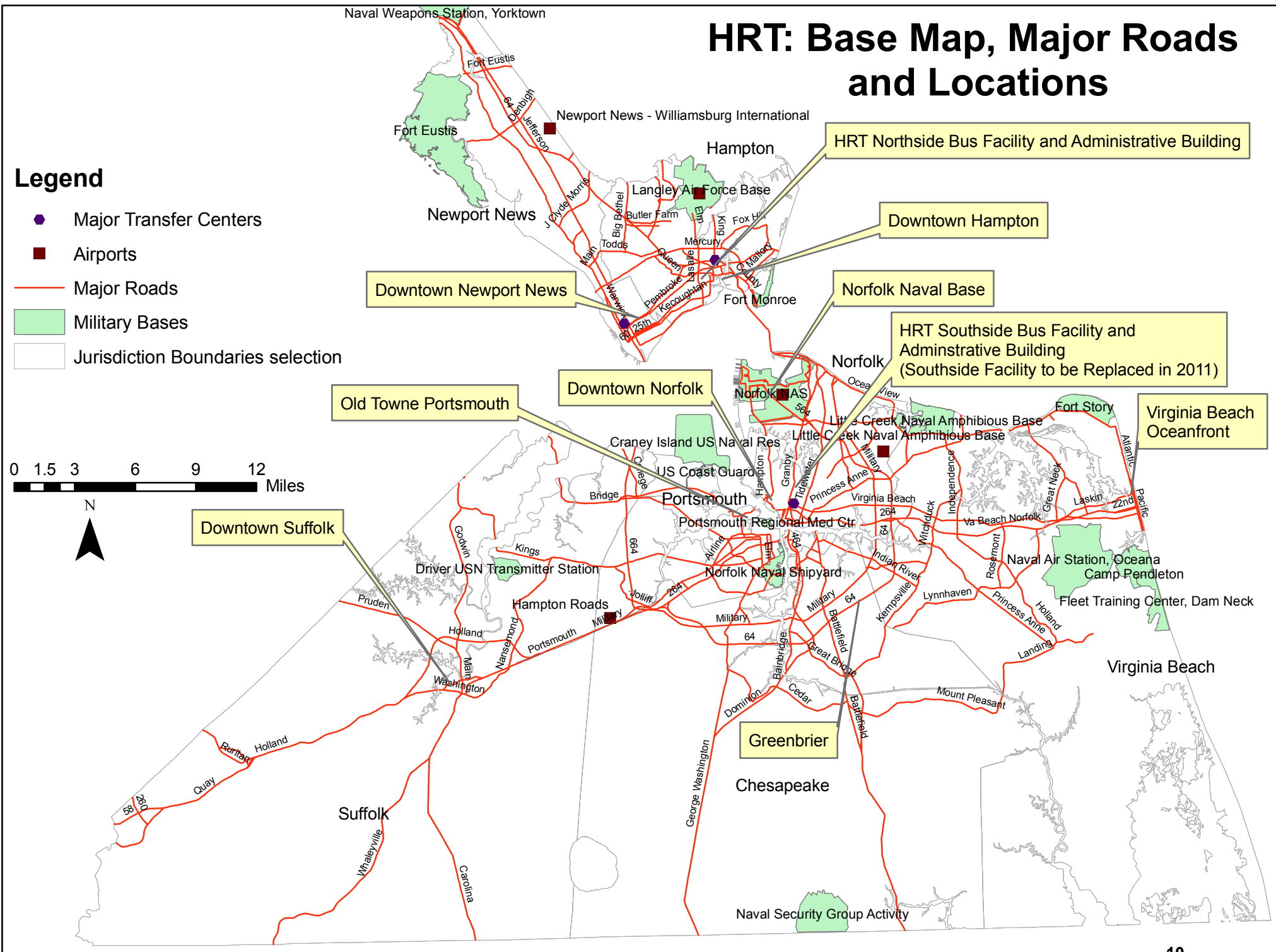
# HRT: Major Roads



Source: US 2000 Census, Hampton Roads TPO.

## Legend

- Major Transfer Centers
- Airports
- Major Roads
- Military Bases
- Jurisdiction Boundaries selection



# APPENDIX D

# ***HAMPTON ROADS TRANSIT SECURITY PLAN***



*January 01, 2007*



**SSP Memorandum of Executive Approval**  
**Hampton Roads Transit**  
**System Security Policy Bus**

To:	All Employees of Hampton Roads Transit
From:	Michael S. Townes, HRT President and CEO
Date:	January 1, 2007
Subject:	System Security Plan (SSP)

It is the objective of Hampton Roads Transit to provide safe, secure and reliable service for its passengers and employees. To demonstrate our commitment, and in fulfillment of Department of Transportation / Federal Transit Administration Federal Regulations, Department of Homeland Security / Transportation Security Administration Security Directives and the TSA Security Inspector Program , Hampton Roads Transit has developed this System Security Program Plan.

Hampton Roads Transit has a sincere concern for the welfare and safety of its employees, contractors, and public safety partners, as well as the public it serves. The operation and maintenance of Hampton Roads Transit requires a continual emphasis on security, from the procurement of new systems and equipment, through the hiring and training of employees, to the management of the agency and the provision of service. The security function must be supported by an effective capability for emergency response, both to support resolution of those incidents that occur on transit property and those events that affect the surrounding community served by Hampton Roads Transit.

This Plan describes the policies, procedures and requirements to be followed by management, maintenance and operating personnel in order to provide a secure environment for agency employees, volunteers, and contractors, and to support effective emergency response. All personnel are expected and required to adhere to the policies, procedures, and requirements established herein and to properly and diligently perform security-related functions as a condition of employment or support for Hampton Roads Transit.

Under Virginia Law, Hampton Roads Transit has the authority to develop and securely operate the HRT system. As President and CEO of HRT, I have designated the Security Manager the authority and responsibility for the preparation, implementation, and update of the System Security Plan. The Security Manager will be continually and directly involved in formulating, reviewing and revising security policies, goals and objectives.

Each Hampton Roads Transit employee and contractor is governed by the requirements and terms of this Plan, and must conscientiously learn and follow prescribed security and emergency rules and procedures. Each employee must operate safely, use equipment, tools and materials properly and be trained in the work rules and procedures for his/her areas of responsibility, including contingency plans for abnormal and emergency conditions. Each employee shall take active part in the identification and resolution of security concerns.

Supervisors shall actively participate in all activities regarding security and cooperate with the policies and objectives specified in this Plan; and shall receive the full cooperation and support of executive management in their activities for improved security and emergency preparedness.

Accountability for security of HRT's system rests with each employee, supervisor, manager, and me, the President/CEO. The Board of Commissioners of HRT and I are absolutely and fully committed to the System Security Plan in that it formalizes security in concert with safety as our transportation system's top priority. Please join me in supporting this important program.

---

Michael S. Townes,  
HRT President and CEO

---

Date



# HAMPTON ROADS TRANSPORTATION DISTRICT COMMISSION

## SECURITY PLAN - TABLE OF CONTENTS

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### SSP Program Plan Revision History

Date	Revision	Description of Change

## **SUMMARY STATEMENT**

To emphasize the need for security, Hampton Roads Transit (herein referred to as (HRT)) has established a set of security activities, guidelines, operating instructions and a threat assessment documented in this Security Plan. The goal of the plan is to afford security for all of HRT's employees and all people who come in contact with HRT, as well as providing security for all of HRT's resources. The objective of this plan is for HRT to achieve a good security and safety record.

The Plan will identify existing and potential problems and put into effect problem solving solutions prior to situations becoming unsolvable. The overall objective of the Plan is to provide a safe and secure environment for all who come in contact with HRT.

The Plan establishes guidelines for HRT on matters involving security. It serves as a plan for security matters by:

1. Detailing the functions of the HRT Security Manager;
2. Increasing security awareness in the workplace;
3. Identifying the threats and problem solving for solutions; and
4. Setting goals and objectives.

The Plan will be reviewed on a regular basis. The purpose of the review will be to evaluate the past performance of the security program and to update the Plan as needed. A commitment by the Chief Executive Officer, Management Team, and all employees of HRT is the best way to insure the success of the Plan. Security awareness for all of HRT's employees and passengers is the key element for the Plan to be successful.

## **PURPOSE OF THE PLAN**

The purpose of the Plan is to identify potential security and safety problems and, to have in place, a trained security staff that will be able to detect, observe and react to security and safety problems in order to ensure that all employees and passengers are afforded the security and safety that is expected. The following security positions are in effect for the system. Their roles are determined by the effort to deter crime and provide a safe environment for all who come in contact with HRT.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

## GOALS

The Goal of the Security Plan are:

- To provide a plan that sets certain standards and guidelines for all employees to follow
- To maintain the highest standards for safe public transportation
- To assure the passengers, employees and all who come in contact with HRT, that security and safety is extremely important, educates all passengers and employees that security is everyone's concern.
- To assure all passengers are aware that HRT has a security plan in effect and is available to render assistance and to problem solve incidents of a security or safety concern.

## SCOPE OF THE PROGRAM

The Security Plan is a combined effort by all employees of HRT. By employing the exclusive services of dedicated Local Police Officers and Security Guards, HRT promotes to the public that safety/security is their foremost concern.

The combined effort is to prevent acts of violence and vandalism and to respond to violations of the HRT Rules of Conduct with the minimum amount of force necessary to control the situation. The security plan will not succeed unless it is combined effort by all employees of HRT. For this reason the people are the most important factor in making a security program successful.

## EXISTING SECURITY CAPABILITIES AND PRACTICES

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

- Website—goHRT.com
- Emails to patrons—Gov Delivery
- Passenger Alerts—pamphlets on buses to send messages to riders
- Operator Alerts—pamphlets on buses to send message to operators
- Internal employee newsletter—The Link
- External public newsletter—On the Move
- The monthly President/CEO Report to the Commission
- Employee poster boards
- Safe Site program
- Hey, is that your bag program

## **SECURITY PLAN ROLES AND RESPONSIBILITIES**

The Security Manager will coordinate and initiate internal security awareness programs within each department of Hampton Roads Transit. Each department within the system experiences its own security issues. Each person that works within that department should be knowledgeable of security awareness and be able to identify security breaches as they occur or to identify potential problems prior to their happening. The Department Director for each department will report problems to the Security Manager and will take the proper actions to resolve the existing or potential problems. The Security Manager works with the Human Resources/Training Department to establish a training class on security issues for new hires and for advanced training. The Security Task Force or STF was formed February 2000. All HRT Chief Officers or designee will serve on the STF. At a minimum the STF will meet quarterly, (January, March, June, September of each year). The STF will identify existing and potential security problems and put into effect problem solving solutions prior to situations becoming unsolvable. The overall objective of the STF is to provide a safe and secure environment for all who come in contact with HRT

### **A. Planning**

1. It is essential that the Security Task Force have regular meetings with the Security Manager to discuss long-term goals of the Security Plan.
2. To Solicit ideas from all employees and customers to improve security.

The Security Manager will review the Plan on an annual basis, and will coordinate directly with other departments in establishing security procedures in their specific areas. The security plan will be reviewed and recommended for adoption by HRT.

### **HRT should use the following response to this email and any similar inquiries:**

The Code of Virginia articulates the qualifications for an individual who wishes to openly carry a weapon in the Commonwealth of Virginia. Additionally, the Code of Virginia governs the appropriate type of weapon and the locations where that weapon may lawfully be carried. As a common carrier, it is the responsibility of HRT to take all reasonable steps to insure the safety of its passengers. To that end, it is the policy of HRT to cooperate fully with local law enforcement agencies to insure that HRT passengers comply with the Code of Virginia.

## **THREAT AND VULNERABILITY, IDENTIFICATION, ASSESSMENT AND RESOLUTION**

The threats experienced by Hampton Roads Transit to date are quality of life issues such as Unlawful Bus Conduct, panhandling, vandalism and graffiti, fare evasion and trespassing. Certain steps have been taken by HRT i.e. bus CCTV systems , added security guards, card access system and proper reporting procedure forms to identify, investigate, and to insure that measures are in place to deter these acts. A transit system cannot be totally incident free, but once threats and vulnerabilities have been identified, then the assessment can be made.

*HRT is currently working to have legislation passed that identifies acts of violence, vandalism, panhandling and harassment to be considered Unlawful Bus Conduct, and are punishable under local and state ordinances.*

By tracking security breaches, security incident reports, police reports and transportation supervisor reports, certain patterns can be identified. The following steps have been initiated to remedy those situation. The STF, Contracted Police Officers, Security Guards and Transportation Supervisors, HRT Rules of Conduct also help to deter these acts of violence.



## SECURITY TESTING

In accordance with FTA guidelines all HRT safety sensitive employees, which includes the Security Manager, are randomly tested for drug/alcohol abuse. HRT takes screening, testing and evaluating of our employees very seriously.

Contracted Police Officers and Security Guards are screened by their agency on mandatory requirements established by the Commonwealth of Virginia.

### A. Data Collection:

Security incident reports received from transportation supervisors, coach operators and other HRT employees are reviewed by the Security Manager. All incident reports contain the following information.

- Date/time
- Location
- Type of threat
- Physical description
- Persons involved
  - Employees
  - Security personnel
  - Passengers
- Narrative of incident
- Estimated cost of damage
- 405 reportable
- Security/police action taken
- Name of supervisor

This information is important to track potential patterns of crime and to take precautionary steps to prevent further incidents of this nature. Upon completion of review of the reports, the Security Manager will determine if further action is necessary. All Security Incident Reports are dated and filed accordingly on the nature of the incident. A combined effort by local law enforcement, HRT Transportation Supervisors and the Security Manager of Hampton Roads Transit to problem-solve these incidents has resulted in an increased awareness of potential threats of violence, vandalism and damage to our resources. Access to incident reports will be determined by the Security Manager and on a need-to-know basis.

### B. Threat and Vulnerability Assessment:

[REDACTED]

[REDACTED]

[REDACTED]

2. Data Analysis:

The information received will be analyzed and classified in one of two categories, (A) Threat, (B) Vulnerability. If analysis reveals that HRT is susceptible to a specific type of security hazard, it will be classified as a vulnerability. Vulnerabilities can be corrected, such as the placement of security guards or security police at HRT transportation centers and park and ride lots. CCTV, monitors and the door access system controls entry to all our buildings for authorized personnel. This decreases the vulnerability for potential damage to our resources and harm to Hampton Roads Transit personnel.

An actual or potential THREAT of danger or physical harm to HRT employees, passengers or resources will be handled with the assistance of the local law enforcement community, additional security and guidance and supervision from Hampton Roads Transit Management Staff. The STF Team has reduced the threat of violence, vandalism and harassment to all who come in contact with the system.

C. Threat and Vulnerability Resolution:

[REDACTED]



## Procedure for Crisis Management

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

## Reporting Threats or Acts of Violence

Each employee of HRT and every person on HRT property is required to report incidents of threats or acts of physical violence of which he or she is aware to their immediate supervisor. The reporting employee shall complete a report form which is available through the security office. In cases where the reporting individual is not a HRT employee, the report should be made to the Office of Human Resources, who will notify the Security Manager. In cases where the reporting individual is an HRT employee, the report should be made to the reporting individual's immediate supervisor or a management level supervisory employee if the immediate supervisor is not available. The supervisor shall contact the Office of Human Resources. Any such incident shall be promptly referred by the Security Manager to the appropriate management level supervisor, who shall take corrective action in accordance with the applicable law, rule or collective bargaining agreement. Concurrently with the initiation of any investigation leading to a proposed disciplinary action, the Security Manager shall report any incidents of threats or acts of physical violence to the local law enforcement authorities.

**Under no circumstance shall an HRT employee (exception of HRT Security Manager) respond to a situation that law enforcement authorities have been contacted to handle. Your job as a HRT employee is to be a good witness. Once law enforcement authorities have deemed situation safe and notified us so, Shaw an HRT employee respond. An example of this would be a stolen vehicle. HRT employees should not involve themselves in an active hunt and recovery of the stolen vehicle. Once law enforcement find the vehicle and notify HRT so, should we then respond.**

### 2. Breach Investigation

Breach investigations are conducted mainly to determine what circumstances led to the breach. The following determining factors are utilized in the investigation:

- description
- location
- source of the threat
- equipment utilized in the breach
- human factors (conditions, knowledge of the system, performance, conditions resulting from the breach)
- determination of probable cause
- recommendations.

Once the investigation is completed, the Security Manager will determine the appropriate actions to take. Local/State laws and HRT policies dictate what action may be used.

### 3. Research and Improvements:

Once the threat and vulnerability investigations are completed, and resolutions have been established to deter the threats, then research can be initiated to improve the system. Results of the investigation will dictate on the research and improvements. Instituting new security technology will have the following criteria: (1) effectiveness, (2) cost with a rapid pay-back period, (3) longevity of the system but not requiring long-term maintenance. Hampton Roads Transit continuously makes contact with outside sources to discuss new technology in the field of security.

The Security Manager considers and utilizes the recommendations of the security force and other HRT employees on matters of safety and security. The involvement of employees is crucial and instills a greater commitment. The Security Manager has an open door policy and all recommendations are answered after they have been considered.

4. Eliminate, Mitigate or Accept:

It is impossible to assume that Hampton Roads Transit will be 100% trouble free. Three possible alternatives are associated with security problems: eliminate, mitigate or accept.

**Eliminate:** To eliminate a security problem is done by redesigning or changing the security system, the security guards, local law enforcement and all HRT employees involved with the security program. The security program is designed to eliminate most of the problems that Hampton Roads Transit has experienced.

**Mitigate:** Hampton Roads Transit augments their present day to day security program by adding surveillance (buildings and buses), increasing security guards and utilizing local law enforcement personnel as situations arise. The Security Manager will evaluate the situation and determine if these changes are warranted.

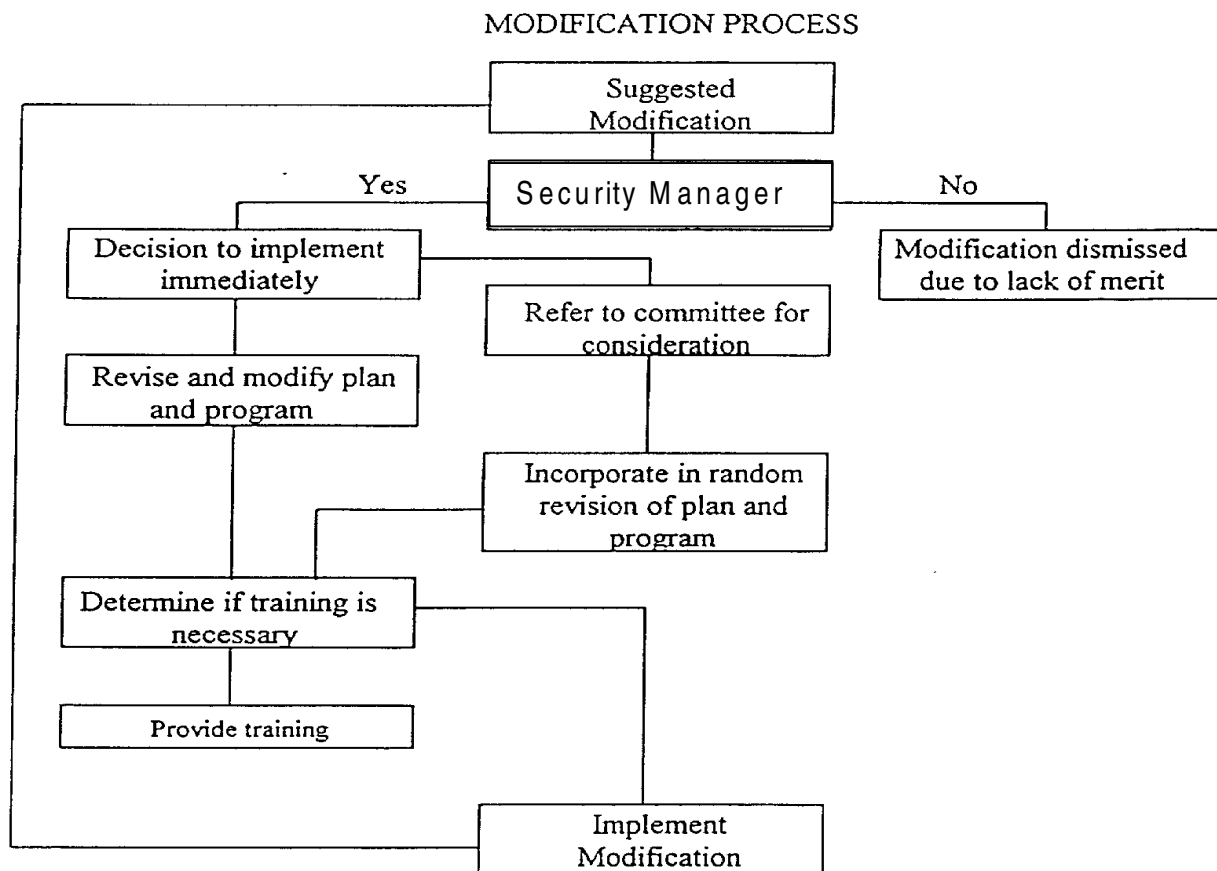
**Accept:** Isolated incidents will have to be accepted for what they are. The Security Manager or Executive staff will decide on what impact the incident had to HRT. Most isolated incidents may not be sufficiently dangerous to warrant any action to be taken. Accepting the level of risk tolerated will be determined by which Hampton Roads Transit operates and the resources available.

## MODIFICATION OF THE SECURITY PLAN AND PROGRAM

Modification of the Security Plan and Program will be made as the situation dictates by the Security Manager and Executive staff. Modifying the plan will be done by amendments to the existing plan. Requirements will change for the security program due to the increasing rate of crime. Hampton Roads Transit is continuously growing. As new construction is developed and routes are added, the need for additional security forces, camera/surveillance equipment, vehicles and radios will increase. All modifications to the Security Plan and Program will be reviewed by the Security Manager prior to implementation.

The Security Manager will determine whether a new security plan and program is warranted depending on the following:

- amount of modifications
- significant increased threats and vulnerabilities
- significant increase in resource to HRT
- significant increase in crime that results in damage to HRT resources
- acts of violence that cause harm to passengers and employees of HRT
- security task force committee recommendations



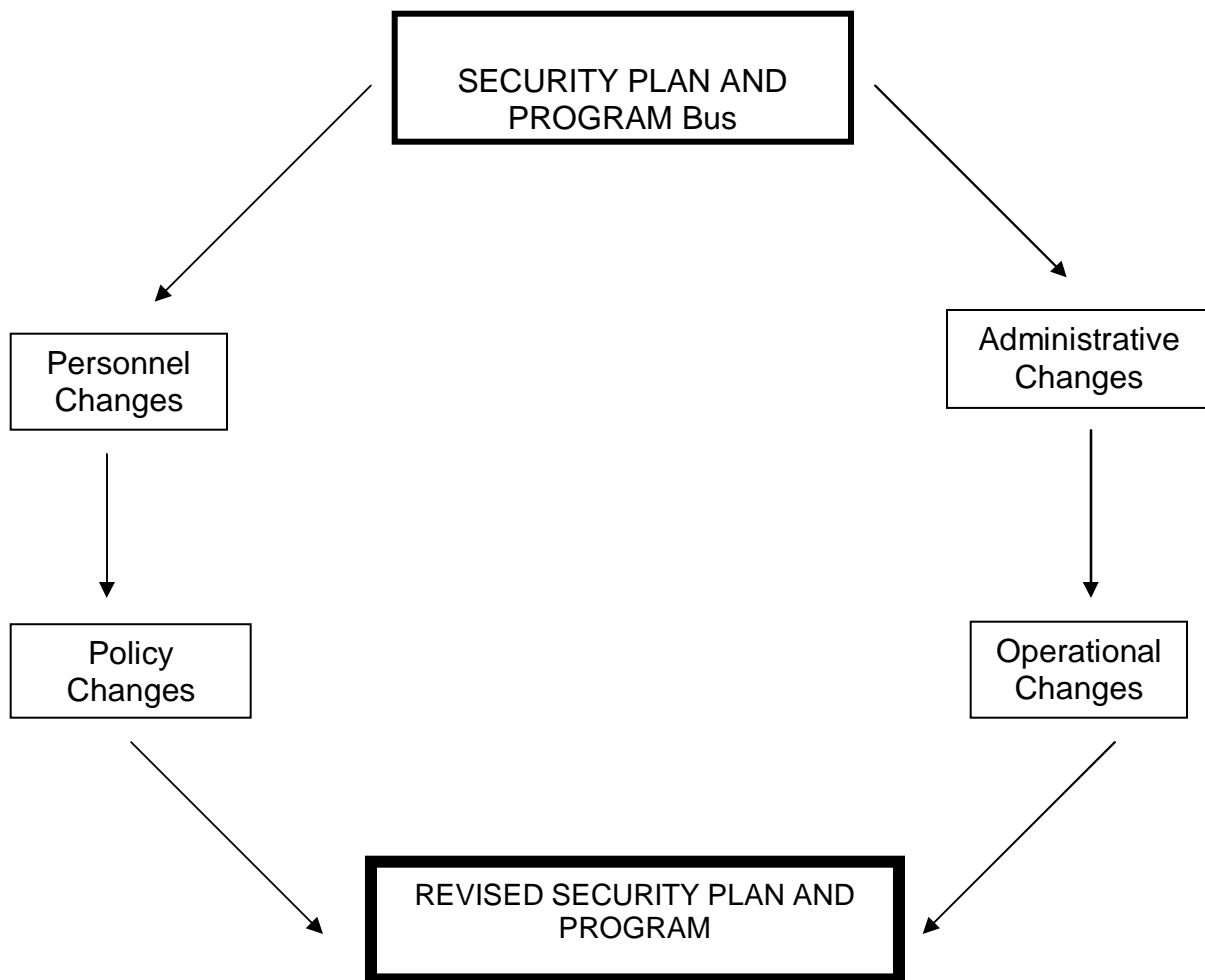
## REVIEW PROCESS

The Security Plan and Program will be reviewed randomly by the Security Manager, or as modifications are warranted. Once the review has been completed, the Security Manager will determine the changes needed to keep the Security Plan and Program current, with existing conditions. If the determination is made to implement modification, all appropriated staff personnel will be notified and local law enforcement personnel will be asked for their comments. Reviewing of the existing plan will keep the plan current as changes occur.

## IMPLEMENT MODIFICATIONS

If the situation dictates an immediate implementation of a modification to the plan, the Security Manager will revise the appropriate pages to the plan and distribute to all recipients of the plan. Should the modification require training for security forces, specific dates, times, individuals and training that is required will be committed to paper. Modification to the plan will be done on an on-going basis under the direction of the Security Manager. The following figures indicate the modification process:

Potential Sources of Modifications to the Plan





## **HRT POLICY GOVERNING VANDALISM AND MISCONDUCT ON HRT VEHICLES**

1. **SEPARATION OF OPERATOR AND PASSENGERS.** Every person controlling, operating, or using any bus shall cause to be affixed on the floor of the vehicle a white (or yellow) line extending from the back of the seat of the Operator of the vehicle to a point in the center of the right front door.
2. **UNLAWFUL USE OF TRANSFERS.** No person shall use, assign, or exchange any transfer used By any bus in violation of the transfer regulations provided for its use.
3. **THROWING MISSILES AT BUSES.** No person shall throw any stone, wood, snow or other substance at or into any bus, or at any person in or on such bus.
4. **PROHIBITED CONDUCT ON BUSES.** No person shall, while a passenger on any bus, do any of the following acts:
  - A. Smoke or possess any lighted or smoldering pipe, cigar, or cigarette, except in a place provided for smoking therein by the owner thereof;
  - B. Consume any beverages, food, or alcohol;
  - C. Destroy, injure, write upon, soil, or remove any part of the bus;
  - D. Spit, urinate, or defecate in or upon or from any part of the bus;
  - E. Throw, deposit, or place any paper, bottles, cans, or any other garbage or solid waste in or upon any bus;
  - F. Throw any object of any kind within any bus or out any door or window of any bus;
  - G. Play or operate any radio, television, tape player, record player or similar electronic sound amplification device unless the sound there from can only be heard through an earphone and is totally inaudible to all other passengers;
  - H. Bring any pet or animal onto any bus other than a seeing-eye dog accompanying a blind person or an animal in a cage.
  - I. Stand or remain in front of the white (or yellow) line marked on the forward end of the floor of any bus while the bus is in motion or after being asked to step back behind the line by the driver;

- J.** Enter a bus through a rear door unless authorized to do so by the driver or other HRT employee;
- K.** Interfere with the bus driver's operation of the bus;
- L.** Wrestle, scuffle, fight, or act in any manner which disturbs the peace and quiet of another person within or without the bus or disrupts or impedes the safe operation of the bus.

**5. PERSONS IN VIOLATION.** The driver of said vehicle may refuse to transport and/or, at his discretion, may order off a bus any person violating the provisions of this subchapter and, upon refusal of any person to remove himself or herself from the bus upon directions to do so by the driver, may report such conduct to any HRT Operations Supervisor or appropriate law enforcement officers.

## **HANDLING INFECTIOUS MATERIALS**

### **1. Procedures**

All employees receive bloodborne pathogen awareness training as part of their new employee orientation.

Bloodborne Pathogens means pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV).

The risk of contracting a bloodborne disease in your normal day-to-day operations is very remote. Needle sticks, human bites, and rendering first aid are some of the ways that infections can occur.

All body fluids may contain blood and may be infectious.

If you are exposed to blood, or other body fluids, while on duty, follow this procedure:

- A.** Notify Dispatch immediately. Dispatch will arrange for you to be transported to a medical facility. You will be offered additional medical counseling and treatment.
- B.** If you have been advised to receive a hepatitis vaccination by the medical facility and you refuse, you will be asked to sign a waiver form. The form will be kept as part of your confidential medical record. If you decide to receive the hepatitis vaccination, you must complete all three shots. Failure to complete all three shots will result in personal liability for the cost.
- C.** When you arrive back at the base, complete an Incident/Security Report.

### **2. Collection and Disposal**

Coach operators should not attempt to clean up a potentially infectious material. The vehicle must be returned to base for proper cleaning and disinfecting. In the event of an emergency, operators should:

- A.** Secure the coach/area on coach to prevent anyone from contacting the suspect material.
- B.** Radio Dispatch, request assistance and instructions.
- C.** If you have been exposed or are at risk, a relief driver and coach will be sent as soon as possible.
- D.** Notify dispatch if you feel it is unsafe to continue on route.

## WHAT TO DO IN CASE OF BOMB THREATS

1. **Bomb threats must not be ignored.** It is the responsibility of Hampton Roads Transit to investigate and search its coaches and facilities when a threat occurs.
2. **Bombs can look like anything.** Their designs and appearance reflect the ingenuity of the bomber. Never presume that a bomb has only one size and only one shape.
3. **Be suspicious of anything that looks *unusual*.** Let bomb experts make the determination of what is and what is not a bomb.
4. **Once information is received that a bomb is on a particular coach, Dispatch will:**
  - A. Instruct the operator to park the coach in the clear and evacuate the coach.
  - B. Instruct the operator to move everyone a safe distance (300 feet or more) from the coach.
  - C. Instruct the operator to keep others away from the vicinity of the coach.
  - D. Contact the police immediately.
  - E. Send an Operation's Supervisor to the scene to assist police in securing the site, assist Security in the evacuation of passengers and arrange transportation of passengers. (The coach operator should assist Security in safeguarding the personal possessions left by passengers during the evacuation.)
  - F. After the coach has been cleared of the bomb threat, check to see if the coach operator wishes to continue or wants road relief.

**NOTE:** *If the bomb threat does not specify a particular coach, follow the same procedure for ALL coaches.*
  - G. Never permit re-entry into the coach until the device has been removed and the area declared safe.





## SECTION IV



**HAMPTON ROADS TRANSIT**  
**HOMELAND SECURITY**  
**ADVISORY SYSTEM**

<b>RECOVERY</b> (Recovery from Terrorist Attack Phase)
<b>ATTACK</b> (Actual Terrorist Attack Phase)
<b>SEVERE</b> (Severe Risk of Terrorist Attack)
<b>HIGH</b> (High Risk of Terrorist Attack)
<b>ELEVATED</b> (Significant Risk of Terrorist Attack)
<b>GUARDED</b> (General Risk of Terrorist Attack)
<b>LOW</b> (Low Risk of Terrorist Attack)

This chart complies with Department of Homeland Security Advisory System and contains additional phases of ATTACK and RECOVERY recommended by the FTA.

**HAMPTON ROADS TRANSIT**  
**HOMELAND SECURITY**  
**INDIVIDUAL THREAT LEVEL RECOMMENDATIONS**

**LOW**  
**(Low Risk of Terrorist Attack)**

Guidelines:

1. Take any Homeland Security training seriously.
2. Report any damage to HRT facility or asset.
3. Report any suspicious persons on or near HRT property.
4. Carry your pocket guide with you.
5. Report any parcels or unattended packages immediately.
6. DO NOT touch any unattended packages.
7. Remember your HRT identification badge.
8. Follow your Employee Rules and Regulations.

**HAMPTON ROADS TRANSIT**  
**HOMELAND SECURITY**  
**INDIVIDUAL**  
**THREAT LEVEL RECOMMENDATIONS**

**GUARDED**  
**(General Risk of Terrorist Attack)**

Guidelines:

1. Maintain all guidelines from LOW.
2. Listen for important information from HRT staff.
3. Review all emergency plans that pertain to your job function.
4. Report any unauthorized persons on HRT property.
5. Check any emergency supplies that you may have on hand.
6. Talk to your coworkers about suspicious persons or incidents occurring on your route.

**HAMPTON ROADS TRANSIT**  
**HOMELAND SECURITY**  
**INDIVIDUAL**  
**THREAT LEVEL RECOMMENDATIONS**

**ELEVATED**  
(Significant Risk of Terrorist Attack)

Guidelines:

1. Maintain guidelines from LOW and GUARDED.
2. Review all Emergency/Safety plans.
3. Make contact with **HRT security/law** enforcement officers when you can so they get to know your face.
4. Inspect facility and asset for the unusual.
5. Remind your peers of the threat level and to be vigilant.
6. Prepare your family and home.
7. Familiarize yourself with emergency exits in your facility or asset.
8. Cooperate with any increased security measures as they are for your safety.
9. Remember to lock facility doors, office doors, asset doors, vehicle doors and trunks.

**HAMPTON ROADS TRANSIT**  
**HOMELAND SECURITY**  
**INDIVIDUAL**  
**THREAT LEVEL RECOMMENDATIONS**

**HIGH**  
**(High Risk of Terrorist Attack)**

Guidelines:

1. Maintain guidelines from LOW, GUARDED and ELEVATED.
2. Park in designated spaces.
3. Become an additional security resource by reporting anything or anyone that appears out of the ordinary.
4. Cooperate with random inspections conducted by **HRT** security. This may be for your vehicle, person or belongings.
5. Remember that access to certain areas of HRT facilities may be limited.
6. Be on the lookout for unattended bags, backpacks, boxes and the like left at or on HRT facilities and assets.
7. Be alert for new faces at your facilities and stops.
8. Be alert for persons dressed “out of season”.

**HAMPTON ROADS TRANSIT**  
**HOMELAND SECURITY**  
**INDIVIDUAL**  
**THREAT LEVEL RECOMMENDATIONS**

**SEVERE**  
**(Severe Risk of Terrorist Attack)**

Guidelines:

1. Maintain guidelines from LOW, GUARDED, ELEVATED and HIGH.
2. Cooperate with uniformed security at all HRT facilities and assets.
3. Be advised that access to HRT facilities and assets may be restricted to HRT staff and any other person on HRT property should be wearing an HRT identification card.
4. Be advised that routes may be reduced or limited.
5. Be suspicious of “new” passengers taking a route near a military facility, public facility or power facility.
6. Be prepared with personal items should you be required to stay over at the HRT facility.

**HAMPTON ROADS TRANSIT**  
**HOMELAND SECURITY**  
**INDIVIDUAL**  
**THREAT LEVEL RECOMMENDATIONS**

**ATTACK**  
**(Actual Terrorist Attack Phase)**

Guidelines:

1. Maintain all guidelines for LOW, GUARDED, ELEVATED, HIGH and SEVERE.
2. Follow your Emergency Action Plan.
3. Report the attack as soon as possible to 911/HRT Dispatch.
4. Provide any security you can at the scene if you are able.
5. Provide assistance for any injured person at the scene if you are able.
6. Provide any detailed information about the attack or attackers to law enforcement and HRT Security.
7. Point out attackers to responding law enforcement if on scene and you are able to do so.
8. DO NOT remove, alter or change anything at the scene of the attack if possible.



**HAMPTON ROADS TRANSIT**  
**HOMELAND SECURITY**  
**INDIVIDUAL**  
**THREAT LEVEL RECOMMENDATIONS**

**RECOVERY**  
(Recovery from Terrorist Attack Phase)

Guidelines:

1. Maintain guidelines for LOW, GUARDED, ELEVATED, HIGH and SEVERE.
2. Beware of secondary attacks during recovery.
3. Be prepared to work long hours.
4. Ensure that your family is safe and understands your responsibilities.
5. Bring extra food, uniforms and personal hygiene items with you to work.
6. Assist where needed, even if it is not in your job description.
7. ALWAYS BE VIGILANT.

***This information should be considered FOR HRT OFFICIAL USE ONLY. Further distribution of this document is restricted to HRT Security and HRT Executive staff.***

**NO REPORT OR SEGMENT THEREOF MAY BE RELEASED TO ANY MEDIA SOURCES.** *Please contact HRT Security at (757) 592-2333 if you have any questions or need additional information.*

# Hampton Roads Transit Threat Level Response Chart

## Statement

Hampton Roads Transit (HRT) has developed a response model that supports the initiatives of the Office of Homeland Security (OHS). The plan is HRT's response to the OHS Homeland Security Advisory System (HSAS). The threat level response in turn, provides guidance in responding to the various OHS threat level designations.

## Introduction and Background

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

## Threat Level/Attack/Recovery Systems Approach

The FTA National Transit Response Model supplements the existing HSAS Threat Condition model with Black and Purple designations to further define appropriate activities when an attack is in progress and during the post-event recovery of transit services and facilities.

<u>Color</u>	<u>Condition</u>
Green	Low threat level
Blue	General threat level
Yellow	Elevated threat level
Orange	High threat level
Red	Severe threat level
Black	Actual Attack
Purple	Recovery

**The Black and Purple designations are interpreted as follows.**

**Black** indicates that an attack is underway against HRT or within the HRT's immediate geographic area. The Black state is entered only when an attack has occurred. Black includes the immediate post-attack time period when HRT may be responding to casualties, assisting in evacuations, inspecting and securing HRT facilities, or helping with other tasks directed by the local emergency management authority.

**Purple** indicates the recovery of HRT service after an attack has occurred. Purple includes restoration of levels of service, routes, and schedules, repairing or reopening facilities, adjustment of staff work schedules and duty assignments, responding to customer inquiries about services, and other activities necessary to restore transit service. The Purple state follows the Black state and may also exist for short time periods when HRT is transitioning from a higher threat condition to a lower threat condition (e.g., from Red to Orange). The Purple state will coexist with the prevailing threat condition. In other words, business recovery (Purple) will be accomplished while maintaining the prevailing readiness status (e.g., Orange protective measures).

## **Threat Level Information**

The Attorney General makes the decision to change the OHS threat level. Changes in threat levels typically will be in sequential stepwise order. As conditions warrant, elevated threat levels will typically progress in order from lowest (green) to highest (red). Likewise, as conditions warrant, returning from higher to lower threat levels will typically progress sequentially.

Transit response posture may vary depending on the nature of the threat level. For example, threat guidance focused on the northeastern region may dictate that transit agencies in that region maintain a higher response posture than other regions of the country. If the guidance is modal-based, for example a threat to subways and transit agencies with subway modes may maintain a higher response posture than agencies without subways. In fact, large multi-modal transit agencies may operate their different modes with different response postures.

However, based on information and conditions, transit agencies should be prepared for the distinct possibility of a non-sequential threat level advisory. For example, if information and conditions warrant, a current threat advisory level of "Yellow" could be directly elevated to "Red."

Transit agencies must work collaboratively with their local and regional emergency management organizations, joint terrorism task force, police agencies, and other organizations. Each transit agency is responsible for determining its own appropriate response posture, based on an assessment of the guidance received from all sources and the response posture of the communities where the agency provides service.

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## **HRT Protective Measures/Activities**

The threat/risk goes up with each successive level. Responses are additive; each level incorporates all activities from the previous levels.

Specific implementation must be determined by management in light of actual events; protective measures for a higher level than officially designated may be implemented by management. For example, if the threat advisory level is elevated from "Yellow" to "Orange" management may elect to implement not only "Orange" level suggested protective measures, but also some "Red" level protective measures.

The following table presents HRT specific protective measures in response to the HSAS threat level conditions, as well as for the actual attack and post-attack/recovery phases.

**HRT Recommended Protective Measures: GREEN**

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## FTA Recommended Transit Protective Measures: RED

**Severe Condition (Red).** A Severe Condition reflects a severe risk of terrorist attacks.

A horizontal bar chart consisting of 20 black bars of varying lengths. The bars are arranged in a single column. The lengths of the bars vary significantly, with the longest bar being the 10th bar from the top and the shortest bars being the 1st and 20th bars. The bars are all solid black and have no labels or titles.

[REDACTED]

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**FTA Recommended Transit Activities: PURPLE**

A Purple condition designates business recovery activities after an attack.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

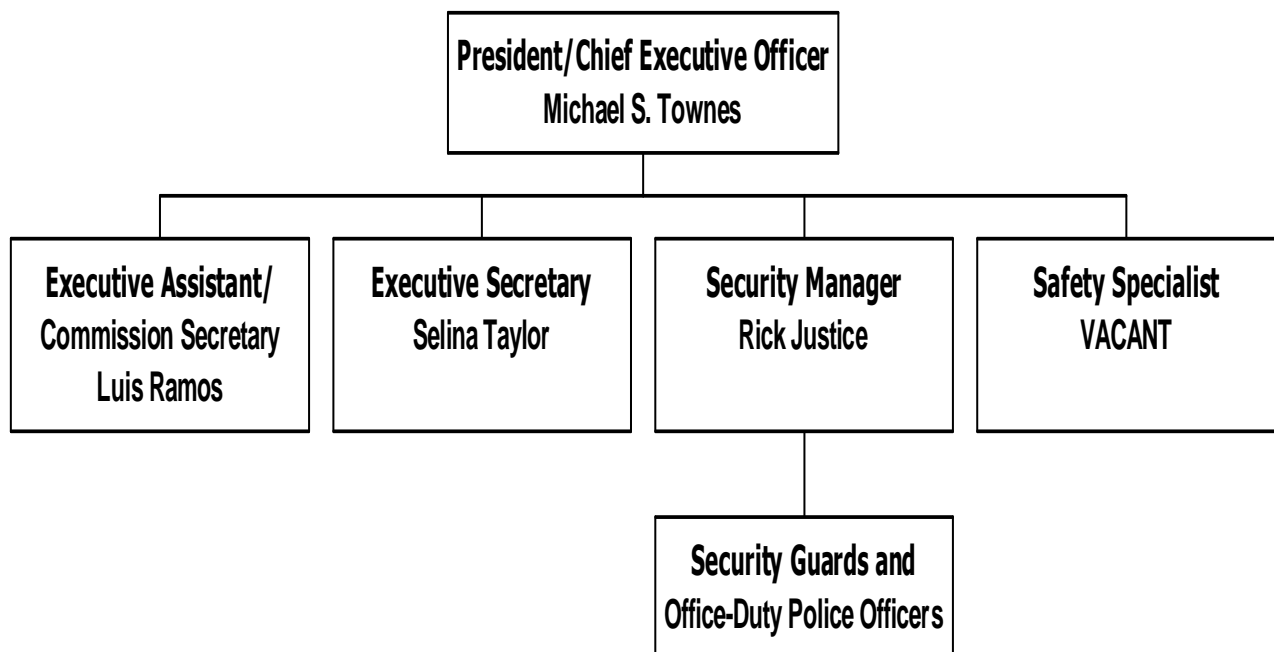
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[REDACTED]

**Executive Department**



# APPENDIX E

**Karen Waterman**

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**From:** Karen Waterman  
**Sent:** Wednesday, June 10, 2009 4:20 PM  
**To:** 'Amber.Ontiveros@dot.gov'  
**Subject:** RE: Equity Analysis for 2009

Hi:

I wanted to let you know that I got your voicemail concerning this equity analysis. Thank you very much for taking the time to review it.

I know that you mentioned in the voicemail that our analysis was sound, but would you mind sending us a quick email to that point? We would appreciate being able to document this process.

Thanks,

Karen

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**From:** Karen Waterman  
**Sent:** Tuesday, May 26, 2009 5:25 PM  
**To:** 'Amber.Ontiveros@dot.gov'  
**Subject:** Equity Analysis for 2009

Hello:

Attached is a filled-out equity analysis for two service adjustments Hampton Roads Transit is considering for June and Sept. of this year. I have also attached a map that show our Title VI population areas.

In short summary, we are reducing service on two express/commuter routes. I have attached the analysis in draft form.

Please let me know if you have any questions.

Thanks,

Karen Waterman

Karen Waterman, AICP  
*Transit Development Manager*  
*Hampton Roads Transit*  
*757-222-6000 x.6699*  
[kwaterman@hrtransit.org](mailto:kwaterman@hrtransit.org)

**Recommended Title VI, Environmental Justice, and Limited English Proficiency**  
**Analysis of Proposed Service and Fare Changes (Spring 2009)**

- 1) What service and/or fare changes does the Transportation District Commission of Hampton Roads dba as Hampton Roads Transit (HRT) propose? Please describe the nature of the change, the bases or rationale for the change, the modes of service impacted, and the communities affected by the change.**

HRT currently operates 54 local bus routes and four shuttle routes. These routes provide service within and between the seven cities that HRT serves (Norfolk, Portsmouth, Chesapeake, Virginia Beach, Hampton, Suffolk, and Newport News.) In addition to local service, HRT provides express (limited-stop) bus service between key employment destinations on seven MAX routes.

HRT has conducted a system-wide analysis designed to identify under-performing routes based on key performance standard measures. These standards, which are listed below, define how well a route is performing relative to the system average:

- Cost recovery of less than 13%
- Subsidy per passenger greater than \$6.20
- Passengers per revenue hour of less than 12
- Passenger per revenue trip of less than 5
- Passenger per revenue mile of less than 0.5

When a route has results lower than three or more of these standards, it is considered an “under performer.” HRT Staff has identified eight local routes and three MAX routes as “under performing.” Two of the MAX routes, as described below were further identified for service reduction.

- **MAX Route 963:** This route has been in service since 2005 and operates weekday peak-hour only with direct service between Hampton Transfer Center in Hampton, Virginia and Naval Station Norfolk in Norfolk, VA. It is proposed for service reduction because it falls below the standard of all five performance measures. Route 963 carries approximately 25 passengers per day. Rather than operating three AM peak hour trips and three corresponding PM peak hour trips, there would be one in the AM and one in the PM only.
- **Service Reduction, MAX Route 960:** This service currently operates between Downtown Norfolk, VA, and the Virginia Beach Ocean Front. The route operates weekday service with 30-minute frequency during peak hours and 60-minute frequency during the off-peak weekday hours and on the weekend.

Route 960 carries approximately 250 passengers on the average weekday. Starting in September 2009, this route will become a weekday, peak-hour only service from September to May. During the months of May, June, July, and



August (tourist season), service will operate seven days a week, throughout the day.

**2) What are the impacts of the service changes on minority and/or low income communities?**

Within the HRT service area, according to the 2000 U.S. Census, the minority population is approximately 40% of the total population and the low-income population is 11% of the total population. The minority population was calculated by subtracting all the “White-Only” population as defined in the US 2000 Census from the area’s total population. The low-income population was calculated as those persons in poverty as identified by the US 2000 Census.

The attached map shows the both MAX Route 960 and MAX 963 and the Census blocks where the total minority and low-income populations is greater than the service area average. It is important to note that while these routes do travel through some of these areas, both of these MAX Routes travel via the interstate only offering limited-stop service.

**3) What are the transit alternatives available for riders who would be impacted by proposed service changes?**

Alternative service is available via transferring from MAX Route 961 to Route 15 at Wards Corner then to Naval Station Norfolk. This will take an additional 20 minutes.

Alternative service for MAX route 963 is Route 20, a local bus service which travels between Downtown Norfolk and the Virginia Beach Oceanfront via Virginia Beach Blvd. This entire trip will take an additional 45-60 minutes and will cost \$2.00 less.

In addition to these routes, TRAFFIX, HRT’s TDM agency, can provide information on possible van pool and car pool options.

**4) What, if any measures would HRT take to avoid, minimize, or mitigate any adverse effects of the service and/or fare change on minority populations and/or low-income populations? What, if any enhancements or offsetting benefits would HRT implement in conjunction with the service and/or fare change?**

Because of the nature of the services being reduced, measures to minimize or mitigate adverse effects of the service change are not necessary. HRT management has made every effort to minimize service cuts in general and to specifically limit service cuts to local routes that are more likely to be used by transit dependent populations. As described in Question 1, there were eight local routes that were classified as under-performers. These eight local routes are used

by non-choice riders to travel to and from work and school and are far more likely to have a disproportionately high and adverse effect on minority populations. Rather than cutting or reducing these services, MAX services that are used primarily by choice, commuting riders were impacted instead. HRT is reviewing ways to improve the performance of the other MAX routes that are underperforming. In addition HRT has received Job Access Reverse Commute grant funding to conduct an analysis to identify service gaps and possible route improvements that could benefit these populations.

**5) Would the proposed service and/or fare change have a disproportionately high and adverse effect on minority populations and/or low-income populations?**

This service change will not have a disproportionately high and adverse effect on minority populations and/or low-income populations. Based on the service evaluation conducted and because these are commuter routes, the riders for these routes are mostly choice riders using the service for commuting purposes. During the summer months, when non-commuting riders would be more likely to utilize the service, MAX Route 963 to the Virginia Beach Oceanfront will return to its all day service.

**9) What steps does HRT plan to take to seek out and consider the viewpoints of minority and low-income populations in the course of conducting public outreach and involvement activities?**

The decision regarding services cuts and reductions were made with the participation of HRT Operations and Oversight Sub-Committee and the HRT Board of Commissioners. Presentations by staff regarding the under-performing routes and possible service changes were made to HRT's Operations and Oversight Sub-Committee on April 10, 2009 and to HRT's Board of Commissioners on April 23, 2009. Both of these meetings were open to the public.

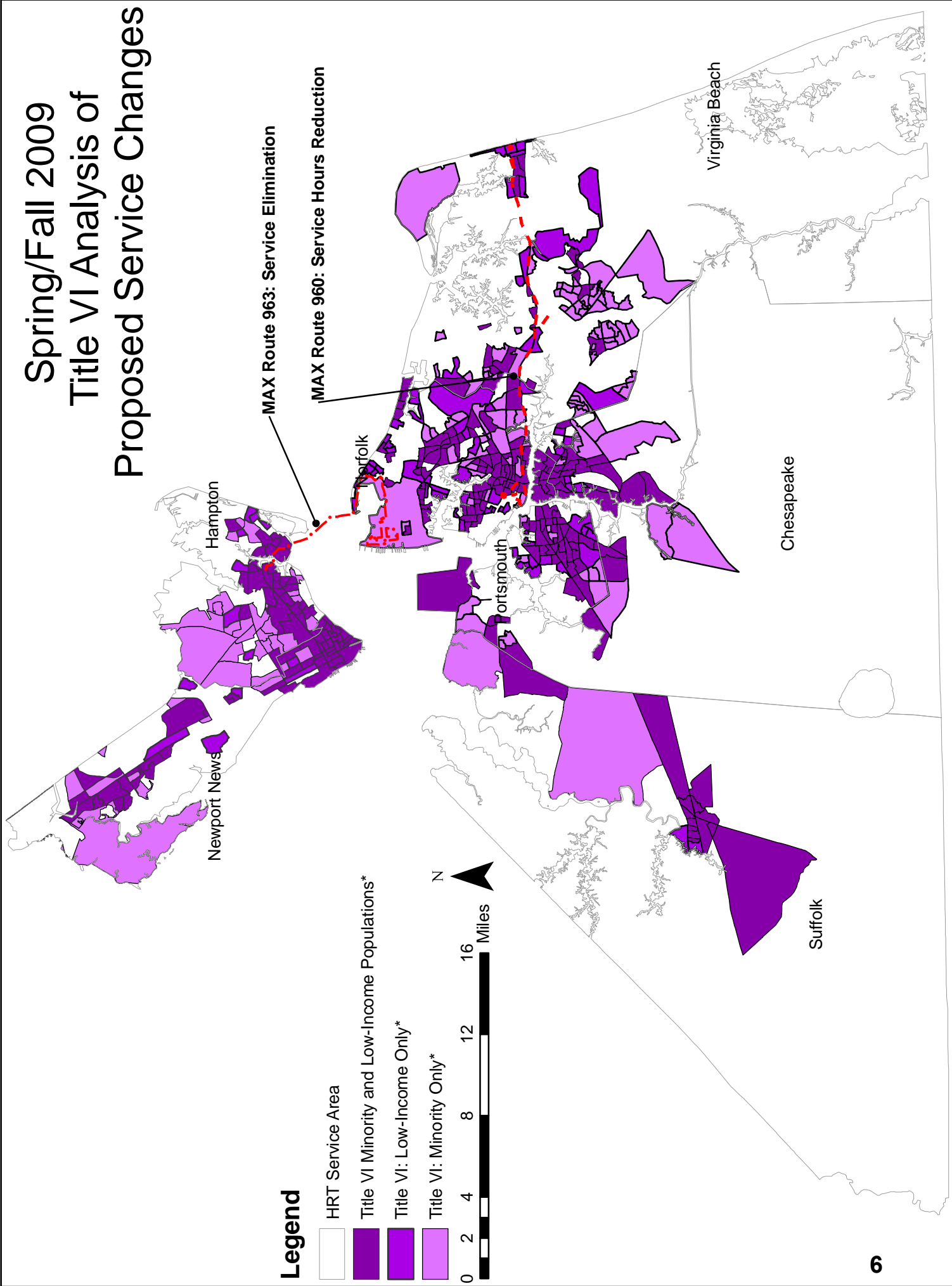
Two community meetings have been established to discuss the service reduction for MAX Route 963 and MAX Route 960. The first meeting was held May 18, 2009 at HRT's Headquarters facility in Hampton, Virginia and the second was held at HRT's facility in Norfolk, Virginia on May 19, 2009. Both of these locations are accessible by local HRT bus routes. Comments received at this meeting will be entered into record at the MAX 960 & 963 public hearing scheduled for Thursday, May 28, 2009 at 1:30PM at HRT on 1500 Monticello Ave in Norfolk. These meetings have been noticed within the local newspapers, on HRT's website, as well as with notices on board the impacted routes, transfer centers served by the routes, and in HRT's offices.

**10) Does HRT believe that it is necessary to disseminate information on the service changes that is accessible to Limited English Proficient persons?**

As stated in our Title VI program, HRT does not believe it is necessary to disseminate information on this service change that is accessible to Limited English Proficient persons. The number of non-English speaking persons residing in HRT's service area is low and the population riding the two routes described in Question 1 are not Limited English Proficient.

DRAFT

# Spring/Fall 2009 Title VI Analysis of Proposed Service Changes



**Recommended Title VI, Environmental Justice, and Limited English Proficiency  
Analysis of Proposed Service and Fare Changes: July 2010**

- 1) What service and/or fare changes does the Transportation District Commission of Hampton Roads dba as Hampton Roads Transit (HRT) propose? Please describe the nature of the change, the bases or rationale for the change, the modes of service impacted, and the communities affected by the change.**

Please see attached table.

- 2) What are the impacts of the service changes on minority and/or low income communities?**

Within the HRT service area, according to the 2000 U.S. Census, the minority population is 40% of the total population and the low-income population is 11% of the total population. The minority population was calculated by subtracting all the “White-Only” population as defined in the US 2000 Census from the area’s total population. The low-income population was calculated as those persons in poverty as identified by the US 2000 Census.

Please see attached table.

- 3) What are the transit alternatives available for riders who would be impacted by proposed service changes?**

Please see attached table.

- 4) What, if any measures would HRT take to avoid, minimize, or mitigate any adverse effects of the service and/or fare change on minority populations and/or low-income populations? What, if any enhancements or offsetting benefits would HRT implement in conjunction with the service and/or fare change?**

On the whole, the majority of changes in the Spring 2010 service change are positive for HRT customers. The changes to Route 962 will add more time for passengers traveling beyond Norfolk, but a timed transfer has been instituted to minimize this inconvenience.

- 5) Would the proposed service and/or fare change have a disproportionately high and adverse effect on minority populations and/or low-income populations?**

This service changes will not have a disproportionately high and adverse effect on minority populations and/or low-income populations. The changes being made have been done to improve on-time performance or extend service to Title VI populations in areas that currently lack service.

**9) What steps does HRT plan to take to seek out and consider the viewpoints of minority and low-income populations in the course of conducting public outreach and involvement activities?**

These changes came from the Comprehensive Operational Analysis completed in the fall of 2009 which included extensive public involvement. HRT presented these changes to HRT Operations and Oversight Sub-Committee and the HRT Board of Commissioners in March/April 2010. These meetings were open to the public. HRT also presented these changes to the Transit Riders Advisory Committee (TRAC). The TRAC is a subcommittee under the Transportation District Commission of Hampton Roads (TDCHR) Executive Committee and is made up of HRT riders. The TRAC was in support of these changes.

**10) Does HRT believe that it is necessary to disseminate information on the service changes that is accessible to Limited English Proficient persons?**

As stated in our Title VI program, HRT does not disseminate information on this service change that is accessible to Limited English Proficient persons. HRT is continuing to monitor this and, in connection with the TPO, will be completing an LEP analysis as part of the Title VI program update due in early 2011.

### July 2010 HRT Service Change

Change	Meets 25% Change in hours or miles	Title VI Analysis
Introducing Victory Crossing Transfer Center for routes 41, 44, 45, 50, 57, and MAX Route 962	No, less than .6 of a mile. No time implications	No. While the routes and the transfer center are in a Title VI area, the change to the routes are approximately only .6 of a mile, and all current stops will continue to be served. Because of this, no specific analysis needed. Provides better service point for transfer with improved passenger amenities.
Reroute 71, 72, 73, and 74 from transfer center at Cherry St. and Saratoga to the new Social Service/Public Health Facility located in downtown Suffolk on Hall St.	No, less than approximately 0.4 of a mile.	Area located in Title VI area, but does not meet the service level threshold. Also, provides service to the social service facility.
Max Route 962: The Route is currently 55.1 miles. With the changes described below, it will now be 54.4 miles.	Not sure, need to see distance change to route, what areas may no longer be served.	No. Currently goes to Victory crossing area, now will serve new transfer center.
Going to Victory Crossing and Chesapeake Center		Add approximately 3 miles to route the end of the route, but provides a intercity connection from downtown Suffolk to the rest of the Southside, which is within a Title VI area (both for income and population). This routing will provide an additional daily connection for approximately 450 daily trips that currently have limited transit connection in or out of downtown Suffolk. This change will provide a connection for route 71, 72, 73, and 74 in downtown Suffolk out of the City to the rest of Hampton Roads. Currently only one route provides a connection from the parking lot in Northern Suffolk. Now passengers will be able to have a one seat ride out of Suffolk.
Extend the current MAX Route 962 into downtown Suffolk from the Magnolia Park and Ride to the Social Service/Public Health Facility	Yes	No, change is less than 1/2 mile, no schedule implication.
Downtown Portsmouth Service will operate to County/Court	No	Yes, adding a transfer will add more than 25% of time for people to get traveling to/from Norfolk at Cedar Grove onto/from Portsmouth. Both of these areas are Title VI areas. Presently, 962 has a average daily ridership of 43 within the City of Norfolk. For the limited number of passengers that use 962 to travel from Norfolk to Portsmouth, passengers will need to take Route 45 to Portsmouth and transfer. The amount of individuals taking the trip beyond Norfolk are limited on 962 and taking Route 45 to Portsmouth will add approximately 10 minutes. Routes 45 and 962 are scheduled to operate every 30 minutes from County and Court. Route 45 will connect with Route 962 at that location (a timed transfer)
Discontinue Service to Norfolk		
Route 11 change layover point from Newport to 35th St. to Newport Ave and Rhode Island so passengers will not be forced to board and layover with bus	No. Simply moving time point around the corner.	NA
Route time adjustments to Route 9	No. Time not added to route, just spread out within trip to meet schedule better.	NA
Split Route 29 and Route 26 so that it is no longer interlined	No. Routes will no longer be interlined to help with on time performance. Route is one of longest in system at approximately 24 miles. Existing stops and timepoints will continue to be served.	NA
Route 5; change from Granby to Tidewater (Discontinue service to Wards Corner and direct service on Bayview, new service along Tidewater Dr. between Little Creek Rd. and Bayview Blvd.)	Yes. The entire route is approximately six miles. The section that will be rerouted is approximately 1.75 miles. <b>This will still be served by Route 1.</b> The change will reroute the route from Granby St. and across Bayview to Tidewater Dr. The route will operate outbound via: Evelyn T. Butts, (R) Little Creek Road, (R) Chesapeake Boulevard, (R) Avenue J, (R) Sewell's Point Road, (L) Little Creek Road (R) Tidewater Drive to Granby Street to Duffy's Lane. Inbound the route will operate via Granby Street, (L) Tidewater Drive, (L) Little Creek Road, (R) Sewell's Point Road, (L) Avenue J, (L) to Evelyn T. Butts.	Currently this section of Route 5 on Granby St. is within a Title VI area, and so is the area on Tidewater Dr. where it will be rerouted to. The section on Granby St. that will be rerouted mainly goes by a cemetery. Currently, service is limited to two or three passengers are picked up in this area daily. This section will continue to be served by Route 1 on half hour headway during the peak and hourly service off-peak. By adding the service to Tidewater Dr., a section of a busy arterial in Norfolk with multifamily units and commercial areas that currently does not have service.
Route 101	Route adjustment to service North yard before going to 49th St. No, less than 25%, limited to one trip.	NA
Route 13 and New Route 14	No, changes less than 25%. This is splitting Route 13 and adding Route 14. Service on Route 13 will stay on Campestalle (no off-route trips to Sunrise Hills neighborhood). Direct service into Chesapeake General Hospital will be removed and service stay on Battlefield.	NA

<b>Riverside Transfer Facility:</b> Adjust service to service new transfer location behind public health Facility on J Clyde Morris Blvd. (Routes 106, 107, and 112)	No, service already provided to hospital, moving location for new improved transfer center.	NA-- improved pick up and drop off conditions
<b>Route 112:</b> Adjust run times and revise schedule on AM Trip	No, changes less than 25%. Run time adjustments not impacting service frequency or locations served. AM trip times revised to provide better timing connection for workers at Canon. Less than 25% change. Run time adjustments. No, changes less than 25%. Run time adjustments not impacting service frequency or locations served.	NA
<b>Route 403</b>	No, less than 25% change. Bus stays on Kempsville Rd. rather than enter Sentara Leigh hospital complex.	NA
<b>Route 25</b>	No, less than 25% change. Bus stays on First Colonial Rd. rather than enter Virginia Beach General hospital complex.	NA
<b>Route 29</b>		NA
<b>Route 36</b>	Service to Tidewater Community College extended to 10 PM Monday through Friday. Service currently operates until 6:41 PM.	This will increase the service hours to TCC by approximately 30%. While TCC is not in a Title VI area itself, increasing the service hours to 10 PM will allow those taking evening classes at the community college to take the bus to and from class and connect with other HRT services. In particular Route 20 which operates from Downtown Norfolk to the Virginia Beach oceanfront, extending through several Title VI areas (both race and low-income). This extension will enhance educational opportunities.



## HRT Fare Policy

**Purpose:** The purpose of this fare policy is to establish goals, objectives and guidelines for setting or restructuring HRT fares. HRT staff and the Commissioners will look to this policy when they make decisions about adjusting fares. All such decisions will also be made in accordance with HRT's enabling legislation and FTA fare policy requirements

**Goals:** The goal of this Fare Policy is to support HRT's overall objective to be an innovative regional provider of inter-modal transportation opportunities at a high level of quality, safety, and efficiency, thereby, promoting regional mobility as the cornerstone of economic development and quality of life in Hampton Roads.

**Objectives:** The following two (2) Fare Policy Objectives are designed to support HRT's fare policy goal. Together, these objectives are intended to balance the desire to keep fares affordable for HRT customers with the need to maximize fare revenue to help maintain and expand transit operations. The current fare structure presented below was developed subject to these objectives. Furthermore, future adjustments to HRT's fare structure must also be developed and evaluated subject to these two (2) objectives.

### 1) Customer/Community Related Objectives

The following three (3) guiding principles directly support HRT's broader goal of promoting transit use and providing high quality public transportation services.

- a) Promote ridership on all modes of HRT transportation: HRT seeks to encourage and facilitate transit ridership within HRT's service area. HRT's fare structure should therefore be devised to be attractive to the widest possible range of existing and potential rider groups. In addition, fare media distribution channels should be developed to ensure convenience and facilitate reasonable access to fare media for all rider groups (subject to the cost efficiency objective outlined below).
- b) Equitable fares: To be equitable, fares must take into account the needs of various population densities, socioeconomic users and types of services offered. The Fare Structure should, therefore, support the travel patterns and requirements of transit riders throughout the service area and should also reflect differences in the level and mode of the service provided.
- c) Enhance mobility & access: The Fare Structure should enhance the ability of riders to access the system and move through it with ease. To do so, the Fare Structure should be easy to understand and should promote a unified system by simplifying and, where effective, unifying fares across modes.

## 2) Financial Objectives

The following two (2) guiding principles are intended to ensure collection of sufficient fare revenues to support operation of HRT services, as well as, fare collection cost efficiency.

- a) Maintain/increase fare revenue stream: Because fare revenue is a critical component of HRT's operating budget, any increase to, or restructuring of, fares should ensure that the total fare revenue stream is maintained at an appropriate level, consistent with HRT's current financial requirements and the current economic condition
- b) Minimize fare collection costs: HRT's fare pricing, fare policy, fare media distribution channels, and fare collection technologies should be developed and operated to minimize the costs associated with fare collection, fare media distribution and revenue processing without sacrificing a high degree of accuracy.

**Guidelines:** The following guidelines outline the recommended steps for developing, evaluating and implementing fare adjustments.

1. Recommendations for adjustments in the fare structure will be developed by HRT staff. Decisions on fare adjustments are made by the Transportation District Commission of Hampton Roads. A public hearing is required for any change in fares.
  - a. Once fare increase(s) or service reductions(s) have been approved by HRT's commissioners, appropriate ads should be placed in local newspapers 30 days prior to the effective date of the fare increase. In addition, transit grams are placed on all revenue vehicles. For major service reductions a public hearing will be held approximately 30 days prior. A major service reduction is defined as any change in service of 25 percent or more of the number of transit route miles on a route or any change in service of 25 percent or more of the number of transit vehicles miles of a route computed on a daily basis for the day of the week for which the change is made.
2. When making recommendations for adjustments to the fare, HRT's staff will consider:
  - The expected rate of increase in the cost of transit operations
  - Ridership and revenue trends
  - Local economic trends
  - Service adjustments
  - The value of the service to the rider
  - HRT's financial situation, and
  - HRT's fare policy goals and objectives

This guideline lists the primary factors to be considered in making recommendations for adjustments to the fare structure. The list of factors to be evaluated is not meant to be exclusive; other factors will need to be considered from year to year. It is further recommended that staff develop, maintain and monitor a set of fare policy performance measures in order to more accurately track the impact and effectiveness of the current fare structure and adjustments in fare structure.

3. HRT will review its fare policy and pricing on a biennial (every other year) basis with the expectation that fares will be adjusted every two years to keep pace with the rate of increase in the cost of transit operations. The first review in this sequence will occur in 2010 with the first fare adjustment to become effective on July 1, 2010. Recommendations for fare adjustments will be developed prior to the budget process for the following fiscal year.
4. For fare changes that do not result in a material change to the fare structure, HRT should develop pricing schedules for two consecutive fare changes (separated by up to two years in time). HRT should then be permitted to seek simultaneous approval from the Commission for both fare changes and would not require a second public outreach process to approve the second fare change. The pricing structures for both fare changes should be made available to HRT riders (e.g., on the HRT web site). The timing and magnitude of the second fare change should not be binding on HRT should the assumptions underlying the second fare change become invalid (e.g., unexpected cost increases). Any changes resulting in either an increase the proposed fare prices or acceleration the timing of the second fare change would require renewal of the Commission approval and public outreach processes. Finally, should two consecutive fare changes be approved, HRT may postpone future reviews of fare policy until one to two years after the second fare change has gone into effect.
5. By Federal law, Handi-Ride fares cannot exceed twice the regular fixed-route fare for the same trip.
6. Increases in the farebox recovery ratio should be pursued primarily by improving the ridership productivity of the system and by improving internal operating efficiency.
7. Prepayment of fares on the fixed-route system shall be encouraged. Accordingly, passes should be priced below the cash fare (on a per trip basis).

8. Fare promotions may be used to attract riders to new HRT services. Fare promotions can be a cost-effective method of attracting riders to new services (such as new bus routes and new rail lines). Fare promotions should not exceed a six (6) month period.
9. Fare payment options that effectively attract a different market segment or encourage increased use of HRT services by current riders shall be developed.
10. The design and number of fare payment instruments shall consider the ease of enforcement by bus operators, ease of understanding by customers and the ease of tracking with both the farebox technology and the back-office technology.

**Standard Procedures for Notifying the Public of Fare Changes:** HRT has developed guidelines for informing the public of adjustments to fares and service levels. These steps have been previously identified in a procedures document but are presented here as part of the fare policy.

Procedure Objectives: The fare adjustment procedures are intended to support the following objectives

- To inform passengers of the adjustment in the fare structure through transit grams and public hearings.
- Allow for public comment on fare changes
- To maintain ridership levels while making adjustments to fares

Materials: When implementing fare adjustments, HRT staff should consider utilizing the following materials and locations as a means of informing the public of proposed fare adjustments.

- Interior and Exterior Bus Cards
- Shelter Poster
- Display units in Customer Service Centers
- Website Updates
- Schedules: Updated schedules will be available for distribution at each board change (May/June, August/September, December/January). Schedules will be distributed throughout the region at participating outlets, including City Halls, Libraries and other facilities. Public Schedules are also available at all HRT Information Centers.
- Operators will be given a personalized information packet which will include copies of all schedules, to assist them and customers in the transition. Packets will be provided to operators one week prior to adjustments.

Public comment: A public hearing is required for any increase change in fares or a major service reduction is planned.

- Once fare increase(s) or service reductions(s) have been approved by HRT's commissioners, appropriate ads should be placed in local newspapers 30 days prior to the effective date of the fare increase. In addition, transit grams are placed on all revenue vehicles.

## DISCOUNTED FARE CATEGORIES AND DONATIONS

**Child and Youth Fares:** Up to two children, less than 38" in height, ride free with each adult paying full fare. Additional children must pay full youth fare. Children who are 38" in height or taller pay the youth fare. The Youth fare is available to children under the age of eighteen. At the discretion of the operator, a youth may be required to show proof of age. Valid forms for proof of age upon boarding are:

1. Elementary, Middle or High School ID
2. DMV Identification card
3. HRT Youth ID
  - i. HRT Youth IDs may be obtained for a nominal fee upon providing proof of age with a valid birth certificate or an Elementary, Middle or High School ID.

**Half-Fare Program – Fixed Route Services:** The objective is to provide reduced fares for fixed route services for seniors and people with disabilities in compliance with the Federal Transit Administration's half-fare requirements.

### Who qualifies for the half-fare program?

1. Persons aged 60 and older
2. Medicare cardholders
3. People who meet the Federal Transit Administration's (FTA)<sup>1</sup> definition of people with disabilities *"...means any individual who, by reason of illness, injury, age, congenital malfunction, or other permanent or temporary disability (including any individual who is a wheelchair user or has semi-ambulatory capabilities), are unable, without special facilities or special planning or design to utilize mass transportation and services as effectively as persons who are not so affected."*

What must be shown to qualify?: On boarding the bus, one of the following proofs must be shown to the driver to qualify for half-fare.

1. Medicare card with a matching photo ID (Medicaid cards are NOT accepted)
2. Official photo verification of age (valid driver's license, passport, State ID card)
3. HRT Half-Fare ID
4. HRT Para-Transit ID

**HRT Half-Fare ID Process:** All applicants must turn in a completed Seniors and Persons with Disabilities application for consideration. Half Fare IDs may be obtained by the customer at a minimal charge to cover the issuance costs. Because identification must be shown each time on boarding, all qualified individuals are to be encouraged to obtain the HRT Half Fare ID.

1. Age Verification
  - a. Individuals with one of the listed proofs of age may be issued an HRT Half Fare ID upon submission and acceptance of the Seniors and Persons with Disabilities application.
2. Disability Verification
  - a. Individuals who are disabled must submit a completed Seniors and Persons with Disabilities ID application. The form must be completed by a qualifying physician or the Veteran's Administration.
  - b. The application should generally be processed within 3 working days of submission.
  - c. If an application is disapproved, the reason for disapproval should be documented.

**Fare Media Donations:** HRT may offer fare discounts for purposes of joint marketing promotions and to support community activities. Donations will occur in the form of fare media and are subject to the participating department's budget. Any community group may request a donation. Authorization for free fare media must be given in writing by completion of the Special Circumstance Fare Media PS Distribution Form.

**Wholesale Discounts:** HRT offers private retail sales outlets and public agencies a wholesale discount on the purchase of bulk fare media. This discount recognizes that these organizations play an important role in the distribution of fare media to HRT customers. This policy applies to all private retail outlets that HRT chooses to contract with for the sales of fare media. All public agency purchases will be issued according to the same discount structure. HRT offers a 5 percent discount on the purchase of bulk fare media for eligible private retail sales outlets who purchase fare media for sale to the general public. To be eligible for the discount, the outlet must provide proof of business establishment, must allow the general public to purchase passes, must agree to sell the fare media at face value and must agree to purchase fare media outright at a minimum of \$4,000 per month or \$2,500 per month for the seasonal programs. Failure to meet the minimum monthly purchases will result in the previously received discount being billed back to the outlet. The retail outlet will conform to HRT's fare media sales policies, as established from time to time, including the monitoring for age, disability or other discount programs requirements.

**Retail Outlets:** HRT may provide delivery of fare media orders over \$3,000 to all Retail Outlets who sell HRT's fare media to the general public.

**Fare Media Bulk/Special Orders:** All fare media orders greater than \$300 are considered Bulk/Special Orders. These orders are required to be called or faxed in at least 3 working days prior to need and must be picked up at HRT's designated facilities or shipped via UPS or Federal Express (S&H charges apply).

## DEFINITIONS

Within the context of this policy, the following definitions apply:

- **Base Fare:** For purposes of the fare policy, the base fare will be defined as the single trip, full cash fare
- **Child:** Any rider under the age of 18 years old.
- **Child Fare:** Fare for any Child under 38" in height.
- **Day Pass:** Period pass valid for unlimited travel on all equally or lesser priced HRT fixed route services from the time of activation through the end of the service day on which the pass was activated.
- **Express Bus Route:** A deluxe fixed route bus route characterized by one or more segments of high-speed, non-stop operation, and with a limited number of stops which are generally provided only near route terminals.
- **Fare Media:** Fare Media shall be defined as all passes, tickets, cards or ID's sold or otherwise distributed for use on various HRT modes in lieu of or for reduced cash fares
- **Half-Fare:** Fare for disabled and senior (age 60 and over) riders. The cash half fare is priced at one-half of the full cash fare. HRT Half Fare ID, HRT ADA Certification ID or Medicare Card Required, Photo ID may be required to match the card to individual
- **Local Bus Route:** Any fixed route service not designated as an express, MAX or shuttle bus route is considered a local bus route
- **MAX Bus Route:** A premium fixed-route express service which operates on commuter configuration coaches.
- **Mode:** Defines the different types of services offered by HRT, which includes local bus, express bus, MAX bus, shuttle bus, light rail, ferry boat and Para-Transit.
- **Senior:** Any person age 60 or older (photo ID with proof of age required).
- **Seven (7) Day Pass:** Period pass valid for unlimited travel on all HRT fixed route services (excluding Express and MAX) for seven consecutive calendar days from the day of activation through the end of the 7<sup>th</sup> consecutive service day.



- **Thirty (30) Day Pass:** Period pass valid for unlimited travel on all HRT fixed route services (excluding Express and MAX) for 30 calendar days from the day of activation through the end of the 30<sup>th</sup> consecutive service day.
- **Youth Fare:** Fare for any rider under 18 years of age (photo ID with proof of age required).

## CURRENT FARE TARRIF

### ***Recommended Fare Structure***

<b>Mode</b>	<b>Regular Service (Bus and LRT)</b>	<b>Regular Service (Ferry)</b>	<b>Shuttles (Loop and NET)</b>	<b>VB Wave</b>	<b>Express Bus</b>	<b>MAX Bus</b>	<b>Handi-Ride (Paratransit)</b>
<b>Cash (no transfer)</b>							
Full Fare	\$1.50	\$1.50	\$0.50	\$1.00	\$2.00	\$3.00	\$3.00
Half Fare	\$0.75	\$0.75	\$0.25	\$0.50	\$1.00	\$1.50	
Youth Fare	\$1.00						
Ferry Roundtrip - Full Fare		\$3.00					
Ferry Roundtrip - E&D		\$1.50					
Under 38"	free	free	free	free	free	free	
<b>1 Ride Pass (Book of 10)</b>		\$15.00					\$30.00
<b>Day Pass -- Full Fare (Book of 5)</b>		\$16.50		\$10.00	\$18.00	\$24.75	
<b>Day Pass -- E&amp;D Fare (Book of 5)</b>		\$8.75		\$5.00	\$10.00		
<b>Period Passes</b>							
1 Day - Full Fare		\$3.50		\$2.00	\$4.00	\$5.50	
1 Day - E&D		\$1.75		\$1.00	\$2.00		
7 Day - Full Fare		\$17.00					
30 Day - Full Fare		\$50.00			\$70.00	\$95.00	
30 Day - E&D		\$35.00					

- = Valid on bus, LRT and ferry
- = Valid on ferry
- = Valid on Loop and NET shuttles
- = Valid on VB Wave; passes valid only on VB Wave
- = Valid on Express bus service; passes valid on all lower priced services
- = Valid on MAX bus service; passes valid on all lower priced services
- = Valid on Handi-Ride
- = Valid on all services except Express, MAX and Handi-Ride

# **APPENDIX F**

# Non-Title VI Census Tract and Block Groups

					Destination #1 Cedar Grove (Downtown Norfolk)							Destination #2 Hampton Transfer Center (Pembroke and King)							Destination #3 Newport News Transfer Center (Downtown Newport News)								
Census Tract and Block Number	City	Percent Minority Population	Percent Population In Poverty	Bus Stop/Intersection Used in Calculating Bus Travel Times	Peak Hour Bus Travel Time In Minutes	Hour Travel Time In Minutes	Number of Transfers	Total Cost of Trip	Distance	Cost Per Mile	Route	Peak Hour Bus Travel Time In Minutes	Non Peak Hour Travel Time	Number of Transfers	Total Cost of Trip	Distance	Cost Per Mile	Route	Bus Travel Time In Minutes	Non Peak Hour Bus Travel Time	Number of Transfers	Total Cost of Trip	Distance	Cost Per Mile	Route		
518000756002	Suffolk	31%	10%	Wilroy Rd	84	114	2	\$ 5.50	19	\$ 0.29	73 to 962 to 45	176	181	3	\$ 5.50	33	\$ 0.18	73 to 962 to 45 to 961	79	80	2	\$ 5.50	25	\$ 0.22	73 to 962 to 967		
517100023001	Norfolk	3%	2%	Cambridge and Hanover	20	20	0	\$ 1.50	4	\$ 0.43	2	94	70	1	\$ 4.50	19	\$ 0.24	2 to the 961	96	80	1	\$ 4.50	21	\$ 0.21	2 to 96;		
518100444012	Virginia Beach	5%	0%	Wolfsnare and Great Neck	54	54	0	\$ 1.50	15	\$ 0.10	20	139	114	1	\$ 4.50	28	\$ 0.16	20 to the 961	164	169	1	\$ 4.50	34	\$ 0.13	20 to 96;		
517100012001	Norfolk	8%	5%	North Shore and Holly	23	23	0	\$ 1.50	6	\$ 0.25	2 or 15	45	36	1	\$ 4.50	13.8	\$ 0.33	15 to 961	60	75	1	\$ 4.50	20	\$ 0.23	15 to 96;		
516500107031	Hampton	16%	4%	Maragret Dr. and Nancy Dr.	60	75	1	\$ 4.50	18	\$ 0.25	115 to 961	8	8	0	\$ 1.50	2.8	\$ 0.54	15	47	37	1	\$ 4.50	11	\$ 0.41	115 to 96;		
518100454193	Virginia Beach	17%	0%	General Booth and Redmill	90	90	1	\$ 4.50	21	\$ 0.21	33 to 960	161	145	2	\$ 5.50	25.8	\$ 0.21	33 to 960 to 961	163	177	2	\$ 5.50	28	\$ 0.20	33 to 960 to 96;		
517100028001	Norfolk	22%	5%	Holly Ave and 40th	8	8	0	\$ 1.50	2.4	\$ 0.63	1	67	67	1	\$ 4.50	14	\$ 0.32	1 to the 961	67	82	1	\$ 4.50	21	\$ 0.21	1 to 96;		
517100007002	Norfolk	26%	6%	Woodford St. and Chapin St.	38	38	0	\$ 1.50	6.7	\$ 0.22	3	44	52	1	\$ 4.50	11	\$ 0.41	1 to the 961	59	74	1	\$ 4.50	17	\$ 0.26	1 to 96;		
517000320043	Newport News	27%	4%	Linbrook Dr.	125	149	1	\$ 4.50	30	\$ 0.15	107 to 961	77	91	1	\$ 4.50	15	\$ 0.30	107 to 111	46	49	0	\$ 1.50	13	\$ 0.12	10		
518100410021	Virginia Beach	29%	6%	Virginia Beach Blvd. and Southgate	45	45	0	\$ 1.50	8	\$ 0.19	20	104	111	1	\$ 4.50	28	\$ 0.16	20 to 961	121	130	1	\$ 4.50	27	\$ 0.17	20 to 961 (15 minut wall		
515500209043	Chesapeake	33%	3%	Lenore	60	60	1	\$ 3.00	9	\$ 0.33	14 to 6	107	112	2	\$ 2.00	28	\$ 0.07	58 to 6 to 91	125	130	2	\$ 4.50	27	\$ 0.17	58 to 6 to 96;		
518100462161	Virginia Beach	34%	1%	Bridgefield Lane and Laurel Green Cir	62	62	1	\$ 3.00	11	\$ 0.29	12 to 6	102	119	2	\$ 4.50	26	\$ 0.17	12 to the 6 to the 961	129	134	2	\$ 4.50	33	\$ 0.14	12 to 6 to 96;		
AVERAGE					56	62	1	\$ 2.83	12	\$ 0.28		94	92	1	\$ 4.21	20	\$ 0.26		96	101	1	\$ 4.42	23	\$ 0.21			
Title VI Census Tract and Block Groups																											
518100454052	Virginia Beach	42%	12%	Holland and Stoneshore	103	100	1	\$ 4.50	14	\$ 0.32	36 to 20	146	150	2	\$ 4.50	27	\$ 0.17	36 to 1 to 961	118	136	2	\$ 5.50	33	\$ 0.17	36 to 12 to 96 Peak; 36 to 960 to 961 Non Peak		
518000757001	Suffolk	48%	19%	Dill and Nancy	108	83	1	\$ 4.50	26	\$ 0.17	962 to 45	160	210	2	\$ 5.50	33	\$ 0.17	962 to 45 to 961	96	108	2	\$ 5.50	28	\$ 0.20	72 to 962 to 96; Peak ; 962 to 96; Non Peak (includes 21 minute walk		
518100462132	Virginia Beach	48%	12%	Rugby Rd and Mill Oak Dr.	57	57	1	\$ 3.00	12	\$ 0.26	12 to 6	97	112	2	\$ 5.50	25	\$ 0.22	12 to 69 to 961	75	127	2	\$ 5.50	31	\$ 0.18	Peak option for 1 to 961; 12 to 6 to 96 P9		
517100013002	Norfolk	48%	15%	Little Creek and Restmere	16	16	0	\$ 1.50	5	\$ 0.30	1	48	50	1	\$ 4.50	12	\$ 0.38	15 to 961	58	59	1	\$ 4.50	19	\$ 0.24	Peak 15 to 961; No Peak 961 only (1 minute wall		
517000321152	Newport News	51%	17%	Middle Ground and Jefferson	107	105	1	\$ 4.50	26	\$ 0.17	112 to 961	65	65	1	\$ 4.50	11	\$ 0.41	112 to 961	45	45	0	\$ 1.50	9	\$ 0.17	11		
517100059024	Norfolk	58%	18%	St Herbert and Beaumon	34	34	0	\$ 1.50	4.5	\$ 0.33	3	64	79	1	\$ 4.50	15	\$ 0.30	15 to 961	75	88	1	\$ 4.50	21	\$ 0.21	15 to 96;		
515500200022	Chesapeake	69%	13%	Gracie Rd.	27	27	1	\$ 3.00	4.5	\$ 0.67	12 to 6	61	61	1	\$ 4.50	24	\$ 0.19	13 to 961	76	76	1	\$ 4.50	30	\$ 0.15	13 to 96;		
516500105012	Hampton	77%	21%	58th and Copeland Dr.	60	83	1	\$ 4.50	20	\$ 0.23	110 to 961	20	25	0	\$ 1.50	4.3	\$ 0.35	Rt 103	20	20	0	\$ 1.50	4	\$ 0.38	10		
517402117002	Portsmouth	78%	26%	Temple and Hansen	36	40	0	\$ 1.50	6	\$ 0.25	45	102	91	1	\$ 4.50	26	\$ 0.17	45 to 961	57	106	2	\$ 5.50	21	\$ 0.26	46 to 962 to 96 Peak; 45 to 961 No Pea		
517402124003	Portsmouth	80%	22%	Sebago and Choctaw	57	60	1	\$ 3.00	9	\$ 0.33	41 to 45	130	135	2	\$ 5.50	27	\$ 0.20	57 to 45 to 961	66	133	2	\$ 5.50	21	\$ 0.26	57 to 962 to 96;		
517100050001	Norfolk	98%	39%	Fauquier Indian River and	6	6	0	\$ 1.50	3	\$ 0.50	6	60	57	1	\$ 4.50	19	\$ 0.24	6 to 961	73	73	1	\$ 4.50	21	\$ 0.21	6 to 96;		
517100047002	Norfolk	99%	43%	Park Ave.	4	4	0	\$ 1.50	1.5	\$ 1.00	20	53	59	1	\$ 4.50	18	\$ 0.25	9 to 961	78	76	1	\$ 4.50	21	\$ 0.21	9 to 96;		
517100052001	Norfolk	99%	67%	Ashwood Court	14	14	0	\$ 1.50	3	\$ 0.50	13	59	59	1	\$ 4.50	19	\$ 0.24	13 to 961	89	76	1	\$ 4.50	25	\$ 0.18	13 to 96;		
AVERAGE					48	48	1	\$ 2.77	10	\$ 0.39		82	89	1	\$ 4.50	20	\$ 0.25		72	86	1	\$ 4.42	22	\$ 0.22			

# APPENDIX G

FIPSTCO	STFID	TRACT	BLKGR P	P092001_T O	P092002_TO	Percent Below Poverty	Total Minority Population	Total Population	Percent Minority
51710	517100044001	004400	1	462	418	90%	1235	1245	99%
51700	517000301003	030100	3	649	523	81%	1571	1584	99%
51700	517000301006	030100	6	238	191	80%	751	767	98%
51710	517100044002	004400	2	342	267	78%	1228	1232	100%
51710	517100042002	004200	2	283	214	76%	76%	832	100%
51800	518000651001	065100	1	15	11	73%	53	54	98%
51740	517402114002	211400	2	503	341	68%	1195	1205	99%
51710	517100052001	005200	1	529	354	67%	1752	1773	99%
51710	517100025003	002500	3	301	201	67%	701	1323	53%
51710	517100041001	004100	1	771	512	66%	2003	2014	99%
51740	517402118001	211800	1	238	148	62%	613	618	99%
51740	517402118005	211800	5	299	184	62%	740	749	99%
51710	517100043001	004300	1	240	146	61%	738	742	99%
51700	517000301005	030100	5	220	131	60%	494	507	97%
51700	517000306001	030600	1	359	213	59%	898	912	98%
51710	517100046002	004600	2	658	390	59%	1657	1688	98%
51710	517100048001	004800	1	468	273	58%	1237	1313	94%
51700	517000301001	030100	1	139	81	58%	678	870	78%
51710	517100035013	003501	3	338	189	56%	809	810	100%
51710	517100042001	004200	1	336	189	56%	776	797	97%
51710	517100052002	005200	2	306	162	53%	964	966	100%
51740	517402119001	211900	1	449	231	51%	1385	1390	100%
51700	517000308002	030800	2	269	137	51%	772	776	99%
51700	517000304001	030400	1	240	120	50%	568	583	97%
51700	517000303004	030300	4	376	186	49%	848	859	99%
51810	518100442001	044200	1	367	175	48%	770	1095	70%
51700	517000306002	030600	2	449	212	47%	1003	1022	98%
51740	517402121001	212100	1	271	125	46%	737	742	99%
51740	517402121002	212100	2	486	224	46%	1080	1109	97%
51700	517000304002	030400	2	225	102	45%	599	609	98%
51710	517100029003	002900	3	270	122	45%	723	737	98%
51650	516500114001	011400	1	395	176	45%	3470	3702	94%
51710	517100047002	004700	2	154	66	43%	1861	1883	99%
51710	517100026001	002600	1	552	235	43%	827	1933	43%
51710	517100035012	003501	2	242	101	42%	671	673	100%
51810	518100462074	046207	4	243	102	42%	182	610	30%
51710	517100043003	004300	3	370	153	41%	695	705	99%
51740	517402120002	212000	2	197	80	41%	538	549	98%
51740	517402126003	212600	3	66	27	41%	165	173	95%
51700	517000303001	030300	1	521	208	40%	1167	1182	99%
51700	517000316013	031601	3	610	244	40%	1269	1470	86%
51710	517100052003	005200	3	320	126	39%	696	700	99%
51710	517100050001	005000	1	379	148	39%	906	925	98%
51550	515500209042	020904	2	437	169	39%	1206	1239	97%
51710	517100025002	002500	2	359	141	39%	977	1137	86%
51740	517402126004	212600	4	289	113	39%	719	898	80%
51710	517100025001	002500	1	257	100	39%	675	860	78%
51810	518100442002	044200	2	947	356	38%	1202	2525	48%
51700	517000304004	030400	4	407	151	37%	1119	1126	99%
51740	517402105001	210500	1	765	281	37%	1486	1691	88%
51700	517000301004	030100	4	222	79	36%	529	531	100%
51800	518000655002	065500	2	518	188	36%	1278	1291	99%
51700	517000304005	030400	5	207	75	36%	624	651	96%
51710	517100057011	005701	1	999	357	36%	2141	2312	93%
51700	517000308003	030800	3	428	149	35%	1046	1052	99%
51700	517000305002	030500	2	322	114	35%	946	983	96%
51800	518000654002	065400	2	398	139	35%	1012	1083	93%
51710	517100031002	003100	2	273	96	35%	647	803	81%
51700	517000314004	031400	4	696	246	35%	1279	1709	75%
51710	517100043004	004300	4	258	87	34%	685	692	99%
51710	517100053002	005300	2	346	117	34%	995	1001	99%
51550	515500201002	020100	2	1401	476	34%	3366	3723	90%
51550	515500202005	020200	5	260	89	34%	653	810	81%
51800	518000651002	065100	2	318	109	34%	639	888	72%
51700	517000308001	030800	1	308	103	33%	760	764	99%
51710	517100043002	004300	2	435	142	33%	1161	1177	99%
51700	517000303002	030300	2	450	145	32%	1147	1158	99%
51700	517000304003	030400	3	345	110	32%	879	884	99%
51710	517100035011	003501	1	364	117	32%	1070	1076	99%
51650	516500119002	011900	2	474	150	32%	1105	1171	94%
51800	518000755002	075500	2	288	93	32%	809	874	93%
51550	515500201001	020100	1	77	25	32%	235	261	90%
51550	515500203001	020300	1	316	100	32%	479	954	50%
51710	517100014001	001400	1	658	208	32%	389	994	39%
51710	517100005001	000500	1	289	92	32%	145	642	23%

FIPSTCO	STFID	TRACT	BLKGR P	P092001_T O	P092002_TO	Percent Below Poverty	Total Minority Population	Total Population	Percent Minority
51800	518000651003	065100	3	475	149	31%	1354	1364	99%
51740	517402119002	211900	2	278	85	31%	762	804	95%
51710	517100040022	004002	2	361	111	31%	108	644	17%
51710	517100053001	005300	1	476	145	30%	1147	1171	98%
51700	517000320045	032004	5	1171	355	30%	2252	2805	80%
51550	515500204001	020400	1	488	144	30%	367	1181	31%
51710	517100034002	003400	2	395	116	29%	1013	1029	98%
51710	517100027001	002700	1	192	55	29%	578	615	94%
51710	517100059012	005901	2	551	160	29%	1189	1443	82%
51650	516500116002	011600	2	409	120	29%	620	776	80%
51650	516500107012	010701	2	779	229	29%	1495	2022	74%
51810	518100458101	045810	1	726	208	29%	1509	2231	68%
51800	518000653004	065300	4	395	113	29%	227	718	32%
51800	518000756002	075600	2	938	261	28%	2621	2651	99%
51800	518000654001	065400	1	1010	281	28%	2497	2849	88%
51710	517100057013	005701	3	557	157	28%	1065	1363	78%
51700	517000303007	030300	7	262	73	28%	544	706	77%
51650	516500104004	010400	4	587	167	28%	936	1438	65%
51550	515500200031	020003	1	601	170	28%	847	1581	54%
51550	515500202001	020200	1	264	71	27%	725	726	100%
51740	517402114001	211400	1	453	124	27%	1004	1007	100%
51710	517100027002	002700	2	338	92	27%	938	970	97%
51740	517402127011	212701	1	494	134	27%	2124	2271	94%
51650	516500105023	010502	3	847	232	27%	1807	2016	90%
51710	517100058001	005800	1	1461	389	27%	3391	3824	89%
51710	517100064002	006400	2	728	197	27%	1782	2001	89%
51800	518000653001	065300	1	283	76	27%	470	598	79%
51700	517000321231	032123	1	373	101	27%	663	965	69%
51740	517402123001	212300	1	557	150	27%	577	1467	39%
51550	515500202004	020200	4	351	91	26%	995	1003	99%
51710	517100034001	003400	1	355	94	26%	910	920	99%
51650	516500118003	011800	3	329	84	26%	866	947	91%
51740	517402117002	211700	2	480	123	26%	867	1116	78%
51710	517100026002	002600	2	263	69	26%	503	693	73%
51550	515500205011	020501	1	65	17	26%	118	166	71%
51710	517100065022	006502	2	692	181	26%	789	1498	53%
51710	517100065021	006502	1	634	167	26%	662	1594	42%
51740	517402116003	211600	3	302	80	26%	284	746	38%
51710	517100023002	002300	2	546	142	26%	391	1151	34%
51710	517100023002	002300	2	546	142	26%	391	1151	34%
51710	517100045001	004500	1	410	104	25%	1123	1135	99%
51710	517100051001	005100	1	362	89	25%	883	918	96%
51740	517402111001	211100	1	126	31	25%	220	228	96%
51710	517100033002	003300	2	473	120	25%	1180	1316	90%
51650	516500118001	011800	1	246	61	25%	572	831	69%
51550	515500203002	020300	2	305	75	25%	526	810	65%
51800	518000653002	065300	2	549	138	25%	923	1440	64%
51710	517100013001	001300	1	441	111	25%	356	710	50%
51740	517402115002	211500	2	411	101	25%	612	1253	49%
51550	515500202003	020200	3	214	51	24%	702	706	99%
51700	517000303003	030300	3	263	64	24%	768	781	98%
51710	517100027003	002700	3	466	113	24%	1252	1307	96%
51710	517100029004	002900	4	234	55	24%	759	787	96%
51650	516500106011	010601	1	627	151	24%	1472	1590	93%
51710	517100016002	001600	2	361	87	24%	928	1022	91%
51740	517402111002	211100	2	169	40	24%	494	547	90%
51740	517402131013	213101	3	463	109	24%	1122	1319	85%
51710	517100016001	001600	1	446	105	24%	687	936	73%
51650	516500101045	010104	5	739	176	24%	1657	2290	72%
51740	517402117003	211700	3	349	82	23%	877	880	100%
51700	517000305001	030500	1	436	99	23%	1205	1222	99%
51650	516500106021	010602	1	721	167	23%	1623	1715	95%
51710	517100059013	005901	3	430	97	23%	1307	1378	95%
51740	517402107002	210700	2	183	43	23%	684	832	82%
51700	517000309002	030900	2	658	153	23%	1249	1549	81%
51550	515500207001	020700	1	1140	267	23%	952	1876	51%
51700	517000322222	032222	2	616	143	23%	996	1989	50%
51710	517100035021	003502	1	246	54	22%	736	742	99%
51710	517100046001	004600	1	171	37	22%	506	521	97%
51710	517100032003	003200	3	419	94	22%	846	1024	83%
51740	517402124003	212400	3	472	105	22%	802	999	80%
51710	517100069012	006901	2	337	75	22%	567	910	62%
51700	517000321251	032125	1	529	117	22%	362	888	41%
51740	517402120003	212000	3	246	51	21%	599	602	100%
51650	516500119003	011900	3	259	55	21%	620	626	99%

FIPSSCO	STFID	TRACT	BLKGR P	P092001_T O	P092002_TO	Percent Below Poverty	Total Minority Population	Total Population	Percent Minority
51710	517100058002	005800	2	387	83	21%	1032	1051	98%
51740	517402120001	212000	1	328	70	21%	985	1008	98%
51550	515500209031	020903	1	722	155	21%	1808	2042	89%
51710	517100061004	006100	4	657	141	21%	1579	1872	84%
51650	516500105012	010501	2	202	43	21%	538	701	77%
51710	517100028002	002800	2	218	46	21%	579	814	71%
51650	516500113002	011300	2	489	105	21%	766	1135	67%
51710	517100055002	005500	2	277	59	21%	480	751	64%
51740	517402124001	212400	1	374	80	21%	588	990	59%
51810	518100404021	040402	1	926	191	21%	1215	2048	59%
51710	517100002012	000201	2	760	156	21%	780	1717	45%
51710	517100065011	006501	1	657	140	21%	642	1416	45%
51710	517100066041	006604	1	939	200	21%	877	2396	37%
51700	517000306003	030600	3	337	68	20%	906	912	99%
51800	518000655001	065500	1	487	99	20%	1285	1346	95%
51650	516500120001	012000	1	206	42	20%	491	576	85%
51700	517000321153	032115	3	245	49	20%	542	722	75%
51810	518100456024	045602	4	657	131	20%	898	1729	52%
51550	515500214033	021403	3	876	179	20%	1278	2520	51%
51550	515500200023	020002	3	466	95	20%	472	1388	34%
51710	517100067001	006700	1	54	11	20%	193	666	29%
51700	517000312001	031200	1	459	93	20%	151	829	18%
51810	518100440023	044002	3	555	112	20%	178	1123	16%
51710	517100057021	005702	1	454	85	19%	1024	1081	95%
51650	516500118002	011800	2	405	78	19%	702	900	78%
51650	516500106012	010601	2	457	86	19%	741	1135	65%
51800	518000752002	075200	2	694	132	19%	1269	1951	65%
51740	517402126002	212600	2	317	61	19%	511	804	64%
51550	515500207002	020700	2	988	188	19%	1740	2784	63%
51810	518100448061	044806	1	794	151	19%	1321	2115	62%
51700	517000312002	031200	2	719	138	19%	899	1472	61%
51800	518000757001	075700	1	948	184	19%	1119	2319	48%
51740	517402130013	213001	3	129	25	19%	1235	2604	47%
51740	517402130013	213001	3	129	25	19%	1235	2604	47%
51710	517100061002	006100	2	700	136	19%	763	1932	39%
51800	518000652002	065200	2	513	100	19%	432	1390	31%
51810	518100424002	042400	2	507	97	19%	341	1275	27%
51650	516500119001	011900	1	500	92	18%	1205	1236	97%
51550	515500215011	021501	1	1095	202	18%	3028	3433	88%
51650	516500109001	010900	1	760	139	18%	1813	2099	86%
51700	517000322123	032212	3	696	124	18%	1648	1926	86%
51710	517100033001	003300	1	461	84	18%	1117	1356	82%
51810	518100402002	040200	2	727	129	18%	1570	2040	77%
51710	517100069013	006901	3	360	63	18%	695	1014	69%
51740	517402109002	210900	2	607	111	18%	962	1413	68%
51710	517100059011	005901	1	630	115	18%	1022	1531	67%
51650	516500113001	011300	1	398	73	18%	679	1117	61%
51710	517100059024	005902	4	508	91	18%	729	1256	58%
51710	517100056022	005602	2	512	90	18%	623	1286	48%
51800	518000653003	065300	3	279	50	18%	300	712	42%
51740	517402125001	212500	1	855	155	18%	770	2193	35%
51740	517402123003	212300	3	457	80	18%	227	1193	19%
51810	518100460051	046005	1	673	121	18%	272	1701	16%
51810	518100440025	044002	5	468	83	18%	65	865	8%
51740	517402118003	211800	3	345	57	17%	956	966	99%
51710	517100029005	002900	5	397	69	17%	913	981	93%
51810	518100406001	040600	1	1689	286	17%	3133	4479	70%
51700	517000321152	032115	2	1125	191	17%	1115	2203	51%
51700	517000311003	031100	3	128	22	17%	197	396	50%
51700	517000311003	031100	3	128	22	17%	197	396	50%
51710	517100059021	005902	1	236	41	17%	320	668	48%
51710	517100060001	006000	1	325	56	17%	378	848	45%
51710	517100069021	006902	1	232	39	17%	266	756	35%
51700	517000321151	032115	1	1278	220	17%	1024	2982	34%
51710	517100028004	002800	4	668	116	17%	505	1478	34%
51700	517000313002	031300	2	443	77	17%	307	929	33%
51550	515500204003	020400	3	231	39	17%	198	667	30%
51650	516500107022	010702	2	673	113	17%	514	1773	29%
51710	517100036001	003600	1	360	60	17%	132	642	21%
51710	517100037002	003700	2	575	98	17%	152	946	16%
51710	517100029001	002900	1	360	58	16%	978	982	100%
51700	517000303005	030300	5	268	44	16%	688	715	96%
51700	517000321242	032124	2	701	115	16%	1458	2222	66%
51810	518100454061	045406	1	386	61	16%	886	1367	65%
51650	516500103052	010305	2	1122	185	16%	1169	1961	60%



FIPSTCO	STFID	TRACT	BLKGR P	P092001_T O	P092002_TO	Percent Below Poverty	Total Minority Population	Total Population	Percent Minority
51740	517402126001	212600	1	353	55	16%	484	929	52%
51550	515500205021	020502	1	422	69	16%	519	1032	50%
51740	517402124002	212400	2	462	74	16%	713	1457	49%
51700	517000320044	032004	4	478	77	16%	577	1268	46%
51650	516500101043	010104	3	261	41	16%	326	806	40%
51650	516500110002	011000	2	629	103	16%	528	1351	39%
51740	517402123002	212300	2	433	71	16%	309	933	33%
51700	517000303006	030300	6	355	52	15%	1060	1117	95%
51650	516500106022	010602	2	572	87	15%	1072	1434	75%
51700	517000301002	030100	2	398	58	15%	507	710	71%
51710	517100006001	000600	1	706	104	15%	1080	1675	64%
51650	516500118004	011800	4	418	62	15%	725	1170	62%
51700	517000316014	031601	4	415	61	15%	689	1124	61%
51710	517100013002	001300	2	752	113	15%	873	1803	48%
51710	517100012002	001200	2	1030	152	15%	1027	2321	44%
51710	517100065012	006501	2	643	94	15%	673	1544	44%
51810	518100404033	040403	3	474	70	15%	490	1239	40%
51740	517402103002	210300	2	221	34	15%	223	598	37%
51710	517100005002	000500	2	372	54	15%	262	854	31%
51710	517100002024	000202	4	381	58	15%	253	968	26%
51710	517100002023	000202	3	397	59	15%	238	964	25%
51740	517402123004	212300	4	336	52	15%	272	1069	25%
51710	517100055001	005500	1	433	66	15%	277	1207	23%
51810	518100410022	041002	2	367	55	15%	74	834	9%
51810	518100438004	043800	4	522	78	15%	43	817	5%
51550	515500202002	020200	2	195	28	14%	513	522	98%
51710	517100032001	003200	1	369	50	14%	642	842	76%
51810	518100404022	040402	2	768	109	14%	1494	1980	75%
51700	517000313001	031300	1	1069	147	14%	1697	2643	64%
51710	517100059031	005903	1	313	43	14%	526	823	64%
51700	517000322215	032221	5	660	94	14%	897	1716	52%
51810	518100402004	040200	4	256	36	14%	345	762	45%
51650	516500108002	010800	2	1152	158	14%	1048	2399	44%
51650	516500108002	010800	2	1152	158	14%	1048	2399	44%
51650	516500108002	010800	2	1152	158	14%	1048	2399	44%
51700	517000319005	031900	5	875	122	14%	745	1785	42%
51810	518100460102	046010	2	611	86	14%	709	1701	42%
51710	517100062002	006200	2	705	99	14%	771	1881	41%
51710	517100059023	005902	3	334	48	14%	338	851	40%
51710	517100017002	001700	2	536	73	14%	418	1197	35%
51740	517402106001	210600	1	413	59	14%	348	982	35%
51740	517402106001	210600	1	413	59	14%	348	982	35%
51700	517000321172	032117	2	1034	140	14%	677	2137	32%
51710	517100003003	000300	3	485	69	14%	287	956	30%
51710	517100017001	001700	1	450	64	14%	251	830	30%
51740	517402104001	210400	1	645	90	14%	267	1425	19%
51710	517100040023	004002	3	581	82	14%	107	1021	10%
51550	515500200035	020003	5	340	46	14%	67	842	8%
51550	515500200033	020003	3	379	53	14%	61	866	7%
51710	517100024003	024000	3	427	58	14%	66	996	7%
51740	517402117001	211700	1	442	57	13%	1055	1071	99%
51550	515500214042	021404	2	1377	174	13%	3999	4391	91%
51700	517000322121	032212	1	390	52	13%	878	1074	82%
51740	517402107001	210700	1	370	48	13%	918	1153	80%
51550	515500200022	020002	2	739	96	13%	1308	1902	69%
51700	517000322223	032222	3	1779	236	13%	2985	4678	64%
51710	517100032002	003200	2	206	26	13%	410	661	62%
51810	518100460133	046013	3	294	39	13%	509	878	58%
51700	517000311002	031100	2	703	91	13%	623	1383	45%
51650	516500103051	010305	1	343	46	13%	233	623	37%
51710	517100059022	005902	2	450	58	13%	433	1213	36%
51710	517100001001	000100	1	415	55	13%	271	1085	25%
51710	517100066032	006603	2	459	58	13%	257	1159	22%
51710	517100004003	000400	3	933	125	13%	323	1737	19%
51710	517100004001	000400	1	763	103	13%	236	1325	18%
51710	517100004001	000400	1	763	103	13%	236	1325	18%
51710	517100004001	000400	1	763	103	13%	236	1325	18%
51710	517100004001	000400	1	763	103	13%	236	1325	18%
51710	517100004001	000400	1	763	103	13%	236	1325	18%
51710	517100004001	000400	1	763	103	13%	236	1325	18%
51710	517100004001	000400	1	763	103	13%	236	1325	18%
51710	517100004001	000400	1	763	103	13%	236	1325	18%
51710	517100015001	001500	1	358	45	13%	125	688	18%

FIPSTCO	STFID	TRACT	BLKGR P	P092001_T O	P092002_TO	Percent Below Poverty	Total Minority Population	Total Population	Percent Minority
51740	517402102001	210200	1	427	55	13%	151	936	16%
51710	517100021001	002100	1	576	74	13%	173	1285	13%
51810	518100440021	044002	1	479	61	13%	76	854	9%
51650	516500120002	012000	2	615	73	12%	1088	1463	74%
51650	516500105011	010501	1	1038	124	12%	1857	2628	71%
51740	517402131011	213101	1	1522	188	12%	2710	3939	69%
51650	516500116001	011600	1	305	36	12%	505	801	63%
51710	517100008002	000800	2	483	58	12%	678	1143	59%
51550	515500216023	021602	3	782	90	12%	1362	2470	55%
51740	517402128001	212800	1	1489	183	12%	1658	3241	51%
51700	517000322214	032221	4	460	54	12%	662	1339	49%
51700	517000322221	032222	1	537	65	12%	578	1188	49%
51710	517100011002	001100	2	355	43	12%	476	996	48%
51810	518100462132	046213	2	1527	181	12%	2053	4319	48%
51550	515500214041	021404	1	812	100	12%	1128	2380	47%
51710	517100055003	005500	3	388	46	12%	422	942	45%
51810	518100454073	045407	3	476	58	12%	734	1653	44%
51810	518100408011	040801	1	457	57	12%	491	1161	42%
51810	518100454052	045405	2	384	46	12%	474	1123	42%
51710	517100003002	000300	2	351	43	12%	326	829	39%
51810	518100448062	044806	2	411	49	12%	371	1100	34%
51710	517100002011	000201	1	715	87	12%	430	1319	33%
51810	518100454081	045408	1	1567	195	12%	1242	4490	28%
51700	517000316015	031601	5	373	44	12%	272	1011	27%
51810	518100454071	045407	1	291	34	12%	283	1050	27%
51740	517402115001	211500	1	242	30	12%	175	676	26%
51650	516500112001	011200	1	552	66	12%	309	1241	25%
51700	517000317002	031700	2	1371	166	12%	752	3197	24%
51810	518100448051	044805	1	569	69	12%	310	1285	24%
51810	518100426002	042600	2	677	82	12%	339	1496	23%
51810	518100428022	042802	2	914	106	12%	411	1803	23%
51810	518100440022	044002	2	604	73	12%	258	1115	23%
51650	516500103084	010308	4	280	34	12%	136	818	17%
51710	517100037003	003700	3	336	40	12%	96	590	16%
51740	517402103003	210300	3	385	45	12%	102	800	13%
51650	516500104001	010400	1	341	39	11%	755	807	94%
51650	516500104003	010400	3	749	82	11%	1806	2040	89%
51650	516500118005	011800	5	235	25	11%	489	682	72%
51650	516500116003	011600	3	472	53	11%	787	1166	67%
51650	516500101044	010104	4	342	39	11%	593	913	65%
51710	517100031003	003100	3	460	49	11%	762	1234	62%
51710	517100070011	007001	1	596	63	11%	1021	1669	61%
51700	517000309001	030900	1	180	20	11%	300	517	58%
51710	517100061003	006100	3	455	52	11%	701	1283	55%
51650	516500103055	010305	5	546	61	11%	606	1387	44%
51710	517100062001	006200	1	510	55	11%	691	1677	41%
51800	518000758003	075800	3	664	72	11%	645	1693	38%
51810	518100448072	044807	2	1053	115	11%	866	2561	34%
51710	517100006002	000600	2	152	17	11%	109	339	32%
51810	518100456022	045602	2	531	56	11%	319	1309	24%
51810	518100404042	040404	2	442	48	11%	209	1121	19%
51810	518100418012	041801	2	951	106	11%	342	1844	19%
51550	515500204002	020400	2	372	41	11%	186	1011	18%
51710	517100006004	000600	4	360	41	11%	153	931	16%
51710	517100007001	000700	1	265	29	11%	93	598	16%
51810	518100440012	044001	2	631	71	11%	176	1108	16%
51550	515500206004	020600	4	252	27	11%	102	714	14%
51710	517100040021	004002	1	660	74	11%	123	1107	11%
51710	517100038001	003800	1	592	66	11%	111	1164	10%
51740	517402118002	211800	2	203	21	10%	579	596	97%
51650	516500120003	012000	3	469	45	10%	1197	1259	95%
51650	516500105013	010501	3	963	98	10%	1700	2208	77%
51810	518100404023	040402	3	623	61	10%	1187	1600	74%
51650	516500118006	011800	6	375	38	10%	489	828	59%
51650	516500103053	010305	3	1075	110	10%	1239	2199	56%
51700	517000320041	032004	1	586	56	10%	858	1544	56%
51700	517000321162	032116	2	870	85	10%	1110	1990	56%
51810	518100462053	046205	3	389	38	10%	626	1147	55%
51810	518100462155	046215	5	588	60	10%	934	1707	55%
51810	518100404044	040404	4	329	33	10%	504	939	54%
51810	518100410042	041004	2	402	41	10%	386	798	48%
51810	518100458091	045809	1	1164	118	10%	1321	2890	46%
51810	518100454142	045414	2	305	31	10%	388	976	40%
51810	518100454144	045414	4	411	42	10%	558	1405	40%
51810	518100454145	045414	5	210	21	10%	281	732	38%

FIPSTCO	STFID	TRACT	BLKGR P	P092001_T O	P092002_TO	Percent Below Poverty	Total Minority Population	Total Population	Percent Minority
51710	517100001002	000100	2	628	61	10%	501	1386	36%
51810	518100454141	045414	1	424	43	10%	510	1428	36%
51800	518000756001	075600	1	669	66	10%	569	1712	33%
51710	517100060002	006000	2	483	48	10%	391	1221	32%
51800	518000755003	075500	3	1166	112	10%	1004	3200	31%
51710	517100005004	000500	4	236	23	10%	198	696	28%
51710	517100069022	006902	2	814	84	10%	483	1991	24%
51810	518100462184	046218	4	298	31	10%	161	849	19%
51650	516500110001	011000	1	788	78	10%	257	1560	16%
51710	517100056012	005601	2	256	25	10%	83	626	13%
51710	517100008001	000800	1	395	40	10%	137	1108	12%
51710	517100030002	003000	2	250	25	10%	68	655	10%
51650	516500101014	010101	4	581	56	10%	106	1612	7%
51740	517402127012	212701	2	294	27	9%	811	818	99%
51740	517402127021	212702	1	648	56	9%	1726	1741	99%
51710	517100029002	002900	2	188	16	9%	388	452	86%
51810	518100404024	040402	4	398	37	9%	1015	1269	80%
51810	518100402001	040200	1	559	52	9%	1012	1390	73%
51550	515500201003	020100	3	224	21	9%	497	741	67%
51650	516500103054	010305	4	765	71	9%	1030	1640	63%
51700	517000322211	032221	1	702	66	9%	1203	1932	62%
51810	518100460124	046012	4	293	25	9%	504	912	55%
51710	517100011001	001100	1	869	80	9%	970	1791	54%
51810	518100454063	045406	3	1118	101	9%	1792	3403	53%
51810	518100460081	046008	1	325	28	9%	545	1050	52%
51700	517000321232	032123	2	1341	115	9%	1958	3846	51%
51550	515500216024	021602	4	795	73	9%	1185	2336	51%
51700	517000323001	032300	1	964	91	9%	2627	5738	46%
51199	511990505002	050500	2	377	33	9%	422	920	46%
51710	517100009001	000900	1	1133	101	9%	9567	20877	46%
51650	516500110003	011000	3	1319	119	9%	1609	3565	45%
51810	518100454101	045410	1	280	24	9%	804	1822	44%
51710	517100066072	006607	2	368	32	9%	422	991	43%
51810	518100458092	045809	2	449	42	9%	630	1483	42%
51650	516500101042	010104	2	411	37	9%	521	1308	40%
51810	518100462051	046205	1	815	72	9%	752	1892	40%
51650	516500111009	011100	9	374	32	9%	462	1253	37%
51710	517100060003	006000	3	591	53	9%	537	1578	34%
51810	518100462064	046206	4	231	21	9%	239	696	34%
51810	518100462073	046207	3	425	38	9%	407	1192	34%
51700	517000321171	032117	1	517	44	9%	388	1329	29%
51550	515500214011	021401	1	611	57	9%	539	1981	27%
51810	518100448083	044808	3	500	43	9%	312	1164	27%
51700	517000311001	031100	1	423	36	9%	276	1077	26%
51740	517402102002	210200	2	631	59	9%	394	1536	26%
51800	518000753001	075300	1	1620	139	9%	1100	4201	26%
51700	517000317001	031700	1	1680	147	9%	1031	4071	25%
51810	518100440013	044001	3	1190	104	9%	469	2419	19%
51800	518000652001	065200	1	411	36	9%	166	904	18%
51710	517100037001	003700	1	332	30	9%	92	681	14%
51810	518100454181	045418	1	535	47	9%	179	1394	13%
51550	515500214024	021402	4	557	51	9%	160	1335	12%
51810	518100448065	044806	5	458	40	9%	131	1228	11%
51550	515500200032	020003	2	436	41	9%	117	1249	9%
51740	517402129003	212900	3	285	27	9%	58	695	8%
51650	516500104002	010400	2	477	38	8%	1156	1177	98%
51700	517000322122	032212	2	492	39	8%	1068	1243	86%
51710	517100057022	005702	2	547	44	8%	1263	1493	85%
51650	516500103082	010308	2	736	62	8%	863	1642	53%
51710	517100066061	006606	1	1224	100	8%	1498	2877	52%
51710	517100030001	003000	1	523	44	8%	651	1321	49%
51810	518100406002	040600	2	552	43	8%	692	1399	49%
51740	517402131031	213103	1	1174	96	8%	1472	3051	48%
51710	517100031001	003100	1	461	39	8%	496	1047	47%
51810	518100460123	046012	3	396	31	8%	548	1169	47%
51710	517100066063	006606	3	249	19	8%	324	706	46%
51710	517100066073	006607	3	296	25	8%	393	864	45%
51710	517100028003	002800	3	525	44	8%	515	1205	43%
51810	518100460132	046013	2	735	60	8%	739	1724	43%
51810	518100462131	046213	1	726	57	8%	727	1686	43%
51810	518100400001	040000	1	514	40	8%	1486	3957	38%
51650	516500107011	010701	1	676	52	8%	595	1604	37%
51650	516500107011	010701	1	676	52	8%	595	1604	37%
51740	517402106002	210600	2	345	28	8%	292	821	36%
51810	518100458031	045803	1	733	57	8%	575	1610	36%

FIPSTCO	STFID	TRACT	BLKGR P	P092001_T O	P092002_TO	Percent Below Poverty	Total Minority Population	Total Population	Percent Minority
51810	518100460085	046008	5	357	29	8%	393	1079	36%
51810	518100462061	046206	1	293	22	8%	320	879	36%
51710	517100066051	006605	1	1103	89	8%	924	2757	34%
51810	518100428011	042801	1	447	35	8%	454	1380	33%
51650	516500112003	011200	3	373	30	8%	279	866	32%
51810	518100442004	044200	4	641	51	8%	415	1308	32%
51650	516500115005	011500	5	371	31	8%	311	1010	31%
51710	517100002022	000202	2	424	34	8%	337	1070	31%
51810	518100428015	042801	5	414	33	8%	393	1286	31%
51810	518100456023	045602	3	1142	89	8%	742	2394	31%
51650	516500112002	011200	2	390	32	8%	271	940	29%
51710	517100005003	000500	3	472	39	8%	396	1378	29%
51710	517100015002	001500	2	648	50	8%	394	1357	29%
51800	518000758001	075800	1	640	53	8%	474	1680	28%
51650	516500107021	010702	1	830	68	8%	572	2103	27%
51650	516500107032	010703	2	543	44	8%	341	1325	26%
51810	518100454152	045415	2	289	23	8%	263	1001	26%
51650	516500103102	010310	2	419	33	8%	234	952	25%
51700	517000321132	032113	2	656	55	8%	412	1680	25%
51810	518100408012	040801	2	453	34	8%	301	1228	25%
51810	518100428012	042801	2	308	25	8%	255	1023	25%
51550	515500210044	021004	4	475	36	8%	267	1160	23%
51740	517402128002	212800	2	824	63	8%	402	1933	21%
51810	518100440011	044001	1	788	63	8%	327	1549	21%
51810	518100458052	045805	2	256	21	8%	162	757	21%
51550	515500214032	021403	2	461	39	8%	201	1144	18%
51710	517100040011	004001	1	654	55	8%	178	1142	16%
51550	515500210043	021004	3	383	32	8%	134	1083	12%
51810	518100422024	042202	4	286	24	8%	102	896	11%
51710	517100070021	007002	1	740	55	7%	1529	1954	78%
51650	516500103091	010309	1	1391	98	7%	2053	3402	60%
51650	516500103063	010306	3	891	65	7%	1259	2158	58%
51800	518000751002	075100	2	1996	134	7%	3620	6273	58%
51710	517100069011	006901	1	567	42	7%	790	1380	57%
51700	517000322212	032221	2	1582	110	7%	2020	3834	53%
51810	518100462156	046215	6	511	35	7%	856	1727	50%
51810	518100454143	045414	3	783	57	7%	1010	2083	48%
51710	517100061001	006100	1	681	48	7%	719	1588	45%
51700	517000321154	032115	4	308	23	7%	290	664	44%
51810	518100460131	046013	1	713	53	7%	935	2165	43%
51650	516500104005	010400	5	555	39	7%	489	1163	42%
51700	517000320042	032004	2	239	17	7%	262	663	40%
51810	518100454054	045405	4	384	26	7%	479	1227	39%
51550	515500209012	020901	2	2376	178	7%	2264	5931	38%
51810	518100454051	045405	1	414	29	7%	317	868	37%
51810	518100454072	045407	2	210	14	7%	248	681	36%
51810	518100462124	046212	4	563	38	7%	613	1753	35%
51810	518100452009	045200	9	790	56	7%	1253	3746	33%
51810	518100454062	045406	2	1222	81	7%	974	2930	33%
51550	515500213012	021301	2	1130	79	7%	1029	3343	31%
51810	518100428023	042802	3	321	23	7%	244	888	27%
51710	517100014002	001400	2	265	18	7%	201	784	26%
51700	517000316021	031602	1	349	25	7%	210	845	25%
51710	517100056014	005601	4	666	47	7%	327	1536	21%
51810	518100444021	044402	1	1070	71	7%	493	2475	20%
51810	518100428013	042801	3	427	28	7%	235	1317	18%
51810	518100416002	041600	2	226	16	7%	118	714	17%
51710	517100066011	006601	1	235	17	7%	76	537	14%
51550	515500210081	021008	1	434	29	7%	119	1126	11%
51810	518100414003	041400	3	485	32	7%	139	1309	11%
51650	516500115003	011500	3	395	26	7%	80	911	9%
51550	515500213011	021301	1	355	25	7%	69	907	8%
51810	518100412003	041200	3	530	39	7%	69	1232	6%
51810	518100446004	044600	4	792	52	7%	69	1813	4%
51710	517100044003	004400	3	254	16	6%	699	701	100%
51740	517402127022	212702	2	719	45	6%	2019	2025	100%
51740	517402127013	212701	3	1104	67	6%	3262	3307	99%
51810	518100428021	042802	1	700	42	6%	1176	2004	59%
51700	517000321241	032124	1	675	43	6%	995	1711	58%
51810	518100408024	040802	4	720	43	6%	1093	1921	57%
51810	518100462052	046205	2	785	48	6%	1098	2104	52%
51800	518000755001	075500	1	770	44	6%	1094	2250	49%
51800	518000755001	075500	1	770	44	6%	1094	2250	49%
51650	516500103041	010304	1	2427	144	6%	3251	6738	48%
51095	510950801023	080102	3	143	8	6%	411	888	46%

FIPSSCO	STFID	TRACT	BLKGR P	P092001_T O	P092002_TO	Percent Below Poverty	Total Minority Population	Total Population	Percent Minority
51810	518100460083	046008	3	1141	74	6%	1784	4049	44%
51810	518100462144	046214	4	416	23	6%	512	1177	44%
51810	518100460084	046008	4	556	35	6%	770	1839	42%
51550	515500210052	021005	2	347	22	6%	608	1540	39%
51700	517000315001	031500	1	1042	65	6%	892	2344	38%
51810	518100460023	046002	3	303	19	6%	311	859	36%
51700	517000321155	032115	5	1358	82	6%	880	2494	35%
51700	517000324002	032400	2	502	31	6%	593	1683	35%
51710	517100059032	005903	2	346	22	6%	266	775	34%
51650	516500101031	010103	1	489	28	6%	412	1242	33%
51810	518100448053	044805	3	1087	69	6%	779	2348	33%
51810	518100424003	042400	3	475	29	6%	481	1526	32%
51810	518100462141	046214	1	479	30	6%	563	1835	31%
51810	518100410021	041002	1	496	28	6%	369	1275	29%
51800	518000758002	075800	2	803	51	6%	602	2149	28%
51650	516500107033	010703	3	291	17	6%	222	821	27%
51700	517000316012	031601	2	746	48	6%	556	2090	27%
51710	517100004002	000400	2	409	24	6%	214	792	27%
51650	516500103061	010306	1	633	38	6%	380	1471	26%
51650	516500103061	010306	1	633	38	6%	380	1471	26%
51550	515500216021	021602	1	400	23	6%	181	702	26%
51710	517100007002	000700	2	463	29	6%	314	1222	26%
51710	517100068001	006800	1	635	37	6%	439	1669	26%
51650	516500101033	010103	3	307	17	6%	204	875	23%
51810	518100458061	045806	1	448	27	6%	303	1391	22%
51810	518100462121	046212	1	287	18	6%	226	1073	21%
51550	515500212003	021200	3	353	21	6%	286	1452	20%
51710	517100018001	001800	1	387	22	6%	176	893	20%
51810	518100454082	045408	2	581	34	6%	392	1923	20%
51810	518100408013	040801	3	380	21	6%	162	976	17%
51810	518100418023	041802	3	313	18	6%	99	670	15%
51550	515500212001	021200	1	497	29	6%	197	1494	13%
51800	518000754002	075400	2	621	39	6%	207	1877	11%
51810	518100448071	044807	1	448	29	6%	87	852	10%
51800	518000757002	075700	2	1330	79	6%	357	3435	10%
51550	515500206002	020600	2	359	20	6%	83	1013	8%
51550	515500216013	021601	3	443	25	6%	100	1324	8%
51810	518100444024	044402	4	417	24	6%	82	1151	7%
51810	518100422022	042202	2	689	39	6%	97	1665	6%
51810	518100430014	043001	4	495	28	6%	58	931	6%
51810	518100418024	041802	4	1103	71	6%	118	2330	5%
51810	518100436001	043600	1	401	25	6%	40	857	5%
51810	518100464001	046400	1	579	33	6%	72	1662	4%
51810	518100464001	046400	1	579	33	6%	72	1662	4%
51810	518100418021	041802	1	850	51	6%	51	1720	3%
51740	517402118004	211800	4	172	9	5%	513	515	100%
51740	517402131041	213104	1	1065	57	5%	2262	3173	71%
51550	515500208012	020801	2	1701	79	5%	3119	4473	70%
51810	518100462055	046205	5	404	21	5%	709	1211	59%
51810	518100454055	045405	5	307	15	5%	509	973	52%
51700	517000313003	031300	3	394	19	5%	453	929	49%
51700	517000321254	032125	4	390	18	5%	519	1058	49%
51810	518100404031	040403	1	687	36	5%	653	1335	49%
51810	518100462192	046219	2	817	38	5%	1411	2902	49%
51740	517402103001	210300	1	270	14	5%	318	696	46%
51810	518100458093	045809	3	345	18	5%	541	1183	46%
51700	517000314003	031400	3	563	30	5%	701	1542	45%
51810	518100418013	041801	3	468	25	5%	754	1712	44%
51810	518100462172	046217	2	238	11	5%	328	838	39%
51700	517000322112	032211	2	715	38	5%	737	1972	37%
51810	518100458013	045801	3	459	23	5%	432	1180	37%
51800	518000754001	075400	1	2200	107	5%	2287	6472	35%
51740	517402130011	213001	1	906	47	5%	748	2251	33%
51740	517402130011	213001	1	906	47	5%	748	2251	33%
51740	517402130011	213001	1	906	47	5%	748	2251	33%
51650	516500102009	010200	9	368	19	5%	2931	9185	32%
51710	517100066071	006607	1	437	21	5%	319	1044	31%
51550	515500208061	020806	1	2062	96	5%	1584	5246	30%
51810	518100458071	045807	1	753	36	5%	484	1599	30%
51810	518100462186	046218	6	321	17	5%	302	1058	29%
51810	518100454151	045415	1	367	19	5%	328	1174	28%
51810	518100454183	045418	3	945	47	5%	898	3185	28%
51650	516500103062	010306	2	376	17	5%	273	1022	27%
51740	517402109001	210900	1	1110	50	5%	571	2129	27%

FIPSSCO	STFID	TRACT	BLKGR P	P092001_T O	P092002_TO	Percent Below Poverty	Total Minority Population	Total Population	Percent Minority
51550	515500206003	020600	3	344	18	5%	221	883	25%
51740	517402130023	213002	3	867	44	5%	537	2148	25%
51710	517100057012	005701	2	328	15	5%	195	825	24%
51810	518100458011	045801	1	701	32	5%	489	2171	23%
51710	517100028001	002800	1	313	17	5%	168	772	22%
51650	516500103092	010309	2	472	24	5%	244	1200	20%
51740	517402128003	212800	3	499	26	5%	238	1186	20%
51710	517100007003	000700	3	455	22	5%	196	1074	18%
51710	517100056021	005602	1	484	22	5%	213	1243	17%
51740	517402116001	211600	1	287	15	5%	116	725	16%
51710	517100038002	003800	2	648	32	5%	191	1373	14%
51810	518100460063	046006	3	350	17	5%	150	1063	14%
51710	517100066022	006602	2	708	35	5%	211	1807	12%
51810	518100422011	042201	1	610	29	5%	144	1412	10%
51710	517100012001	001200	1	604	33	5%	120	1439	8%
51710	517100012001	001200	1	604	33	5%	120	1439	8%
51740	517402129002	212900	2	615	31	5%	111	1354	8%
51740	517402129002	212900	2	615	31	5%	111	1354	8%
51740	517402129002	212900	2	615	31	5%	111	1354	8%
51810	518100440027	044002	7	429	22	5%	56	821	7%
51810	518100464003	046400	3	339	17	5%	59	846	7%
51810	518100448074	044807	4	238	13	5%	46	741	6%
51740	517402129004	212900	4	242	13	5%	28	581	5%
51810	518100440024	044002	4	655	35	5%	68	1419	5%
51650	516500101011	010101	1	304	14	5%	33	759	4%
51810	518100454121	045412	1	727	36	5%	48	1805	3%
51810	518100462054	046205	4	585	23	4%	1039	1604	65%
51550	515500213021	021302	1	549	22	4%	974	1723	57%
51810	518100432001	043200	1	203	9	4%	594	1055	56%
51810	518100460121	046012	1	334	12	4%	538	1013	53%
51810	518100458063	045806	3	400	14	4%	641	1329	48%
51810	518100460125	046012	5	232	10	4%	256	542	47%
51810	518100462171	046217	1	370	15	4%	567	1228	46%
51810	518100460082	046008	2	215	9	4%	390	872	45%
51810	518100462162	046216	2	557	21	4%	818	1834	45%
51700	517000321256	032125	6	759	34	4%	746	1933	39%
51700	517000324001	032400	1	824	35	4%	806	2050	39%
51810	518100410032	041003	2	383	17	4%	386	1019	38%
51810	518100456021	045602	1	870	35	4%	614	1727	36%
51650	516500108001	010800	1	1141	40	4%	981	3136	31%
51810	518100458051	045805	1	221	8	4%	198	653	30%
51650	516500103083	010308	3	590	25	4%	459	1586	29%
51550	515500208051	020805	1	387	15	4%	294	1015	29%
51810	518100408023	040802	3	216	9	4%	209	727	29%
51650	516500101013	010101	3	387	15	4%	294	1054	28%
51700	517000320043	032004	3	352	15	4%	319	1202	27%
51810	518100462185	046218	5	318	14	4%	279	1041	27%
51710	517100020001	002000	1	233	9	4%	166	638	26%
51810	518100454161	045416	1	1150	41	4%	922	3572	26%
51550	515500214021	021402	1	430	19	4%	346	1359	25%
51810	518100448063	044806	3	412	17	4%	211	856	25%
51810	518100448081	044808	1	1036	38	4%	565	2299	25%
51810	518100408014	040801	4	352	14	4%	218	1009	22%
51810	518100454191	045419	1	714	28	4%	495	2271	22%
51550	515500208013	020801	3	583	24	4%	338	1648	21%
51650	516500101012	010101	2	954	34	4%	472	2318	20%
51710	517100056023	005602	3	334	15	4%	180	904	20%
51810	518100462112	046211	2	274	10	4%	174	854	20%
51550	515500215021	021502	1	741	29	4%	371	1937	19%
51710	517100066021	006602	1	263	11	4%	127	672	19%
51710	517100049001	004900	1	707	31	4%	239	1299	18%
51810	518100464004	046400	4	384	17	4%	188	1024	18%
51650	516500107031	010703	1	427	17	4%	164	1013	16%
51810	518100414001	041400	1	752	31	4%	323	2153	15%
51810	518100416001	041600	1	404	16	4%	166	1087	15%
51810	518100460093	046009	3	454	19	4%	171	1140	15%
51700	517000316023	031602	3	634	25	4%	209	1506	14%
51740	517402128004	212800	4	433	16	4%	156	1086	14%
51740	517402130012	213001	2	1103	42	4%	408	2863	14%
51740	517402130012	213001	2	1103	42	4%	408	2863	14%
51810	518100454171	045417	1	587	21	4%	259	1849	14%
51810	518100460052	046005	2	766	32	4%	206	1594	13%
51810	518100460062	046006	2	407	16	4%	162	1204	13%
51810	518100460064	046006	4	561	21	4%	199	1511	13%
51740	517402130022	213002	2	660	28	4%	169	1402	12%

FIPSSCO	STFID	TRACT	BLKGR P	P092001_T O	P092002_TO	Percent Below Poverty	Total Minority Population	Total Population	Percent Minority
51810	518100462042	046204	2	990	41	4%	292	2416	12%
51550	515500210041	021004	1	520	19	4%	182	1690	11%
51550	515500216015	021601	5	711	30	4%	215	2003	11%
51710	517100056013	005601	3	395	15	4%	121	1136	11%
51550	515500210082	021008	2	571	21	4%	163	1705	10%
51740	517402116002	211600	2	326	13	4%	78	802	10%
51810	518100444023	044402	3	555	20	4%	146	1490	10%
51550	515500206001	020600	1	498	19	4%	115	1214	9%
51810	518100464002	046400	2	346	13	4%	94	993	9%
51810	518100464002	046400	2	346	13	4%	94	993	9%
51740	517402116005	211600	5	452	19	4%	75	984	8%
51810	518100422023	042202	3	323	14	4%	73	861	8%
51810	518100424004	042400	4	432	19	4%	104	1297	8%
51650	516500115002	011500	2	504	19	4%	70	1049	7%
51650	516500115002	011500	2	504	19	4%	70	1049	7%
51700	517000315002	031500	2	896	39	4%	152	2044	7%
51810	518100430021	043002	1	660	24	4%	140	1966	7%
51810	518100430012	043001	2	1174	44	4%	140	2508	6%
51810	518100430013	043001	3	1015	41	4%	68	1872	4%
51810	518100444013	044401	3	250	10	4%	27	707	4%
51810	518100434002	043400	2	723	26	4%	43	1429	3%
51810	518100438002	043800	2	302	12	4%	18	801	2%
51650	516500105021	010502	1	311	9	3%	441	558	79%
51710	517100070022	007002	2	587	19	3%	865	1505	57%
51550	515500208014	020801	4	262	8	3%	449	877	51%
51650	516500103071	010307	1	1966	65	3%	2621	5401	49%
51810	518100462056	046205	6	345	12	3%	485	992	49%
51810	518100462152	046215	2	458	14	3%	748	1642	46%
51650	516500103081	010308	1	1160	38	3%	1362	3154	43%
51550	515500208052	020805	2	1547	43	3%	1748	4200	42%
51550	515500213022	021302	2	1608	48	3%	2158	5149	42%
51810	518100462163	046216	3	401	14	3%	578	1394	41%
51700	517000321131	032113	1	706	23	3%	604	1509	40%
51700	517000322213	032221	3	542	14	3%	600	1603	37%
51199	511990502042	050204	2	1300	45	3%	1664	4960	34%
51550	515500208071	020807	1	603	18	3%	438	1288	34%
51810	518100458081	045808	1	523	17	3%	465	1387	34%
51810	518100462188	046218	8	213	6	3%	224	656	34%
51550	515500209043	020904	3	2634	90	3%	2045	6208	33%
51810	518100460092	046009	2	544	15	3%	525	1601	33%
51550	515500211021	021102	1	1654	51	3%	2038	6591	31%
51810	518100460111	046011	1	582	17	3%	420	1498	28%
51810	518100462187	046218	7	262	9	3%	216	802	27%
51700	517000320021	032002	1	480	12	3%	284	1262	23%
51550	515500208042	020804	2	236	8	3%	168	745	23%
51710	517100002021	000202	1	335	9	3%	182	811	22%
51700	517000322111	032211	1	1205	38	3%	718	3399	21%
51199	511990502061	050206	1	1674	42	3%	1051	5062	21%
51810	518100442003	044200	3	791	27	3%	338	1584	21%
51650	516500101036	010103	6	311	8	3%	164	802	20%
51810	518100414002	041400	2	633	19	3%	339	1674	20%
51700	517000316024	031602	4	618	21	3%	261	1394	19%
51700	517000314001	031400	1	590	16	3%	275	1533	18%
51710	517100006003	000600	3	280	8	3%	147	838	18%
51810	518100456012	045601	2	720	18	3%	338	1834	18%
51650	516500103103	010310	3	495	14	3%	180	1196	15%
51550	515500209011	020901	1	790	21	3%	325	2101	15%
51710	517100003001	000300	1	640	18	3%	172	1183	15%
51710	517100003001	000300	1	640	18	3%	172	1183	15%
51710	517100039001	003900	1	171	5	3%	52	350	15%
51550	515500200021	020002	1	488	13	3%	168	1194	14%
51810	518100412002	041200	2	1529	44	3%	482	3330	14%
51810	518100448082	044808	2	313	8	3%	90	663	14%
51810	518100458032	045803	2	677	22	3%	246	1785	14%
51800	518000752001	075200	1	1827	62	3%	751	5183	14%
51700	517000319003	031900	3	789	21	3%	249	1907	13%
51810	518100454103	045410	3	1105	30	3%	422	3303	13%
51199	511990503012	050301	2	1057	27	3%	285	2282	12%
51550	515500210071	021007	1	739	24	3%	276	2233	12%
51710	517100019001	001900	1	289	8	3%	82	665	12%
51550	515500210072	021007	2	910	29	3%	267	2536	11%
51550	515500215012	021501	2	1465	43	3%	509	4450	11%
51810	518100410033	041003	3	312	8	3%	90	803	11%
51810	518100426001	042600	1	387	12	3%	95	967	10%
51740	517402116004	211600	4	352	10	3%	74	851	9%

FIPSTCO	STFID	TRACT	BLKGR P	P092001_T O	P092002_TO	Percent Below Poverty	Total Minority Population	Total Population	Percent Minority
51810	518100460101	046010	1	233	6	3%	62	653	9%
51700	517000316022	031602	2	321	9	3%	58	707	8%
51550	515500210091	021009	1	475	16	3%	109	1429	8%
51810	518100420002	042000	2	375	12	3%	80	949	8%
51810	518100460024	046002	4	356	10	3%	80	1023	8%
51810	518100460091	046009	1	382	11	3%	78	1035	8%
51810	518100460094	046009	4	461	14	3%	114	1396	8%
51700	517000319001	031900	1	639	20	3%	126	1780	7%
51550	515500211014	021101	4	718	25	3%	151	2157	7%
51550	515500210062	021006	2	675	21	3%	122	2102	6%
51740	517402130021	213002	1	292	10	3%	45	732	6%
51700	517000318001	031800	1	952	28	3%	106	2217	5%
51810	518100420003	042000	3	377	10	3%	67	1305	5%
51810	518100422021	042202	1	336	11	3%	45	1008	4%
51810	518100440026	044002	6	688	19	3%	52	1483	4%
51810	518100430011	043001	1	1233	32	3%	71	2703	3%
51810	518100438003	043800	3	520	14	3%	24	938	3%
51810	518100434001	043400	1	387	10	3%	13	760	2%
51810	518100436002	043600	2	397	13	3%	20	881	2%
51550	515500214043	021404	3	316	6	2%	869	931	93%
51710	517100049002	004900	2	176	3	2%	1146	1582	72%
51710	517100064001	006400	1	604	15	2%	937	1452	65%
51650	516500103064	010306	4	604	13	2%	1047	1708	61%
51810	518100458064	045806	4	373	8	2%	603	1046	58%
51550	515500216022	021602	2	381	7	2%	556	977	57%
51650	516500103101	010310	1	840	18	2%	887	1856	48%
51550	515500208011	020801	1	425	7	2%	555	1174	47%
51810	518100462143	046214	3	482	9	2%	684	1562	44%
51810	518100458082	045808	2	283	6	2%	394	945	42%
51810	518100462154	046215	4	339	6	2%	496	1200	41%
51810	518100460053	046005	3	936	23	2%	981	2524	39%
51810	518100454053	045405	3	257	6	2%	281	731	38%
51710	517100061005	006100	5	286	6	2%	302	827	37%
51740	517402131032	213103	2	1489	23	2%	1520	4143	37%
51810	518100460054	046005	4	607	13	2%	570	1575	36%
51810	518100454163	045416	3	757	16	2%	849	2414	35%
51810	518100462062	046206	2	809	17	2%	778	2198	35%
51700	517000321252	032125	2	524	11	2%	508	1520	33%
51700	517000321161	032116	1	2662	48	2%	1843	6164	30%
51700	517000322113	032211	3	442	11	2%	402	1352	30%
51810	518100410044	041004	4	474	9	2%	382	1303	29%
51810	518100448073	044807	3	731	15	2%	490	1716	29%
51700	517000320022	032002	2	1480	26	2%	1299	4606	28%
51810	518100462072	046207	2	416	9	2%	379	1395	27%
51650	516500101034	010103	4	526	9	2%	368	1442	26%
51550	515500208041	020804	1	1722	26	2%	1209	4596	26%
51700	517000320051	032005	1	483	8	2%	385	1526	25%
51810	518100458012	045801	2	417	8	2%	286	1140	25%
51810	518100462063	046206	3	411	8	2%	320	1290	25%
51700	517000321141	032114	1	699	15	2%	417	1707	24%
51650	516500101035	010103	5	438	9	2%	288	1269	23%
51810	518100428014	042801	4	415	10	2%	248	1066	23%
51810	518100454102	045410	2	1217	20	2%	857	3898	22%
51800	518000751001	075100	1	465	8	2%	242	1120	22%
51710	517100066062	006606	2	359	6	2%	198	1003	20%
51810	518100460061	046006	1	286	7	2%	173	892	19%
51810	518100404032	040403	2	538	9	2%	254	1408	18%
51810	518100454182	045418	2	1302	25	2%	647	3685	18%
51550	515500210084	021008	4	555	12	2%	311	1882	17%
51810	518100454162	045416	2	632	10	2%	371	2171	17%
51710	517100020002	002000	2	345	7	2%	111	681	16%
51810	518100460021	046002	1	658	14	2%	262	1741	15%
51550	515500211012	021101	2	314	5	2%	145	1077	13%
51810	518100454172	045417	2	415	8	2%	175	1303	13%
51810	518100454201	045420	1	424	8	2%	178	1411	13%
51650	516500115001	011500	1	506	11	2%	137	1201	11%
51550	515500210075	021007	5	686	13	2%	225	2231	10%
51810	518100412001	041200	1	700	15	2%	183	1752	10%
51550	515500211013	021101	3	455	8	2%	131	1468	9%
51550	515500212002	021200	2	783	15	2%	220	2448	9%
51550	515500200011	020001	1	565	14	2%	132	1596	8%
51810	518100418022	041802	2	367	7	2%	49	773	6%
51810	518100430022	043002	2	723	17	2%	126	2120	6%
51700	517000318002	031800	2	682	17	2%	79	1737	5%
51810	518100420001	042000	1	432	7	2%	61	1281	5%



FIPSTCO	STFID	TRACT	BLKGR P	P092001_T O	P092002_TO	Percent Below Poverty	Total Minority Population	Total Population	Percent Minority
51740	517402129005	212900	5	737	15	2%	65	1838	4%
51810	518100422012	042201	2	554	12	2%	59	1651	4%
51550	515500214031	021403	1	379	9	2%	28	964	3%
51710	517100023001	002300	1	436	7	2%	32	1191	3%
51710	517100024002	002400	2	380	8	2%	32	954	3%
51740	517402129001	212900	1	323	6	2%	23	809	3%
51710	517100024001	002400	1	512	8	2%	28	1297	2%
51810	518100446003	044600	3	356	8	2%	14	778	2%
51810	518100462153	046215	3	452	4	1%	685	1570	44%
51810	518100462071	046207	1	675	8	1%	840	2108	40%
51700	517000321253	032125	3	1188	6	1%	1440	3863	37%
51810	518100462161	046216	1	687	9	1%	663	1960	34%
51810	518100462151	046215	1	575	7	1%	506	1681	30%
51550	515500216011	021601	1	820	7	1%	635	2379	27%
51810	518100462181	046218	1	295	2	1%	236	881	27%
51810	518100462111	046211	1	274	4	1%	217	839	26%
51550	515500208072	020807	2	2315	17	1%	1508	6272	24%
51550	515500210051	021005	1	928	5	1%	655	2880	23%
51810	518100454192	045419	2	1048	8	1%	748	3390	22%
51810	518100404041	040404	1	1080	13	1%	488	2468	20%
51199	511990502031	050203	1	1584	14	1%	928	4848	19%
51550	515500215024	021502	4	641	9	1%	311	1722	18%
51810	518100460022	046002	2	591	8	1%	286	1589	18%
51700	517000314002	031400	2	527	7	1%	223	1330	17%
51700	517000320011	032001	1	510	5	1%	210	1220	17%
51810	518100444022	044402	2	510	7	1%	204	1170	17%
51550	515500210061	021006	1	1578	13	1%	797	5009	16%
51700	517000320012	032001	2	620	7	1%	273	1781	15%
51810	518100454173	045417	3	480	7	1%	162	1446	11%
51700	517000319002	031900	2	471	5	1%	117	1369	9%
51550	515500210085	021008	5	584	8	1%	186	2070	9%
51550	515500215023	021502	3	700	9	1%	182	1975	9%
51810	518100424001	042400	1	410	5	1%	80	1033	8%
51810	518100416003	041600	3	511	6	1%	73	1006	7%
51700	517000315003	031500	3	753	7	1%	109	1820	6%
51550	515500216012	021601	2	538	8	1%	79	1298	6%
51810	518100444011	044401	1	715	6	1%	91	1936	5%
51810	518100454203	045420	3	489	7	1%	87	1671	5%
51710	517100022001	002200	1	391	5	1%	32	1064	3%
51810	518100456011	045601	1	401	6	1%	28	1040	3%
51810	518100438001	043800	1	486	4	1%	5	1295	0%
51710	517100047001	004700	1	0	0	0%	1	1	100%
51710	517100063001	006300	1	0	0	0%	3	4	75%
51810	518100402003	040200	3	202	0	0%	325	559	58%
51810	518100462191	046219	1	319	0	0%	521	976	53%
51740	517402108001	210800	1	0	0	0%	92	179	51%
51650	516500101041	010104	1	461	0	0%	548	1236	44%
51810	518100462133	046213	3	226	0	0%	273	638	43%
51810	518100460122	046012	2	273	0	0%	366	886	41%
51810	518100460086	046008	6	361	0	0%	479	1214	39%
51810	518100404043	040404	3	236	0	0%	275	810	34%
51810	518100458062	045806	2	195	0	0%	214	623	34%
51650	516500105022	010502	2	225	0	0%	161	497	32%
51700	517000319004	031900	4	483	0	0%	359	1125	32%
51700	517000321255	032125	5	359	0	0%	300	946	32%
51810	518100450001	045000	1	104	0	0%	507	1563	32%
51810	518100462182	046218	2	267	0	0%	311	961	32%
51810	518100410043	041004	3	280	0	0%	327	1049	31%
51810	518100460087	046008	7	581	0	0%	543	1886	29%
51810	518100462183	046218	3	626	0	0%	560	1938	29%
51810	518100462113	046211	3	310	0	0%	258	925	28%
51810	518100462142	046214	2	244	0	0%	212	856	25%
51199	511990506001	050600	1	133	0	0%	127	520	24%
51199	511990503013	050301	3	963	0	0%	609	2807	22%
51810	518100408022	040802	2	221	0	0%	181	838	22%
51650	516500101032	010103	2	533	0	0%	327	1636	20%
51700	517000320052	032005	2	515	0	0%	264	1377	19%
51810	518100410041	041004	1	343	0	0%	178	926	19%
51810	518100462041	046204	1	778	0	0%	416	2210	19%
51810	518100462123	046212	3	362	0	0%	199	1069	19%
51700	517000321173	032117	3	279	0	0%	129	709	18%
51810	518100408021	040802	1	237	0	0%	123	686	18%
51810	518100454174	045417	4	861	0	0%	504	2789	18%
51550	515500214022	021402	2	489	0	0%	259	1513	17%
51710	517100066031	006603	1	533	0	0%	213	1289	17%

# APPENDIX H

FIPSSTCO	STFID	TRACT	BLKGR P	P092001_T O	P092002_TO	Percent Below Poverty	Total Minority Population	Total Population	Percent Minority
51810	518100410034	041003	4	261	0	0%	115	677	17%
51810	518100454193	045419	3	886	0	0%	506	3064	17%
51810	518100462122	046212	2	236	0	0%	120	716	17%
51650	516500103085	010308	5	267	0	0%	123	841	15%
51550	515500214023	021402	3	594	0	0%	261	1866	14%
51810	518100410031	041003	1	415	0	0%	157	1211	13%
51810	518100454202	045420	2	417	0	0%	165	1277	13%
51550	515500210042	021004	2	341	0	0%	133	1132	12%
51810	518100416004	041600	4	236	0	0%	78	692	11%
51810	518100462114	046211	4	253	0	0%	72	672	11%
51550	515500200034	020003	4	281	0	0%	63	654	10%
51550	515500210074	021007	4	358	0	0%	126	1227	10%
51550	515500210092	021009	2	645	0	0%	218	2214	10%
51740	517402122001	212200	1	12	0	0%	2	20	10%
51810	518100418011	041801	1	548	0	0%	121	1229	10%
51810	518100460103	046010	3	285	0	0%	77	798	10%
51550	515500216014	021601	4	283	0	0%	75	867	9%
51700	517000316011	031601	1	208	0	0%	38	574	7%
51199	511990503011	050301	1	593	0	0%	113	1574	7%
51550	515500210073	021007	3	350	0	0%	58	821	7%
51550	515500211011	021101	1	223	0	0%	41	649	6%
51810	518100446002	044600	2	530	0	0%	103	1806	6%
51550	515500210083	021008	3	789	0	0%	134	2495	5%
51710	517100056011	005601	1	245	0	0%	31	625	5%
51810	518100444012	044401	2	412	0	0%	57	1089	5%
51810	518100422013	042201	3	281	0	0%	29	774	4%
51550	515500215022	021502	2	293	0	0%	20	780	3%
51810	518100446001	044600	1	672	0	0%	30	1732	2%
				523793	56252	11%	566779	1419365	40%



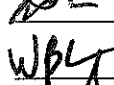
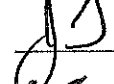
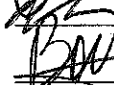
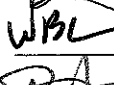

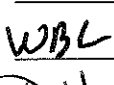


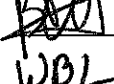
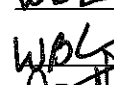

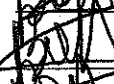
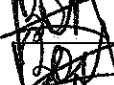
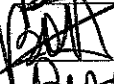




# FEDERAL FISCAL YEAR 2011 CERTIFICATIONS AND ASSURANCES FOR FEDERAL TRANSIT ADMINISTRATION ASSISTANCE PROGRAMS

*(Signature page alternative to providing Certifications and Assurances in TEAM-Web)*

Name of Applicant: TRANSPORTATION DISTRICT COMMISSION OF HAMPTON ROADS

The Applicant agrees to comply with applicable provisions of Categories 01 - 24. \_\_\_\_\_

The Applicant agrees to comply with applicable provisions of the Categories it has selected:

<u>Category</u>	<u>Description</u>	<u>POC</u>	<u>Initials</u>
1	Assurances Required For Each Applicant	Philip Shucet	
2	Lobbying	James Toscano	
3	Procurement Compliance	Wright Parkes	
4	Protections for Private Providers of Public Transportation	William Law	
5	Public Hearing	James Toscano	
6	Acquisition of Rolling Stock for Use in Revenue Service	Wright Parkes	
7	Acquisition of Capital Assets by Lease	Barry Herring	
8	Bus Testing	William Law	
9	Charter Service Agreement	Ray Amoruso	
10	School Transportation Agreement	Ray Amoruso	
11	Demand Responsive Service	William Law	
12	Alcohol Misuse and Prohibited Drug Use	Danielle Hill	
13	Interest and Other Financing Costs	Barry Herring	
14	Intelligent Transportation Systems	Alesia Cain	
15	Urbanized Area Formula Program	Barry Herring	
16	Clean Fuels Grant Program	William Law	
17	Elderly Individuals and Individuals with Disabilities Formula Program and Pilot Program	William Law	
18	Nonurbanized Area Formula Program for States	Barry Herring	
19	Job Access and Reverse Commute Program	Barry Herring	
20	New Freedom Program	Barry Herring	
21	Paul S. Sarbanes Transit in Parks Program	Barry Herring	
22	Tribal Transit Program	Barry Herring	
23	Infrastructure Finance Projects	Barry Herring	
24	Deposits of Federal Financial Assistance to a State Infrastructure Banks	Barry Herring	

**FEDERAL FISCAL YEAR 2011 FTA CERTIFICATIONS AND ASSURANCES SIGNATURE PAGE**  
(Required of all Applicants for FTA assistance and all FTA Grantees with an active capital or formula project)

AFFIRMATION OF APPLICANT

Name of Applicant: TRANSPORTATION DISTRICT COMMISSION OF HAMPTON ROADS

Name and Relationship of Authorized Representative: Philip A. Shucet, HRT President and CEO

BY SIGNING BELOW, on behalf of the Applicant, I declare that the Applicant has duly authorized me to make these certifications and assurances and bind the Applicant's compliance. Thus, the Applicant agrees to comply with all Federal statutes and regulations, and follow applicable Federal directives, and comply with the certifications and assurances as indicated on the foregoing page applicable to each application it makes to the Federal Transit Administration (FTA) in Federal Fiscal Year 2011.

FTA intends that the certifications and assurances the Applicant selects on the other side of this document, as representative of the certifications and assurances in this document, should apply, as provided, to each project for which the Applicant seeks now, or may later, seek FTA assistance during Federal Fiscal Year 2011.

The Applicant affirms the truthfulness and accuracy of the certifications and assurances it has made in the statements submitted herein with this document and any other submission made to FTA, and acknowledges that the Program Fraud Civil Remedies Act of 1986, 31 U.S.C. 3801 *et seq.*, and implementing U.S. DOT regulations, "Program Fraud Civil Remedies," 49 CFR part 31 apply to any certification, assurance or submission made to FTA. The criminal provisions of 18 U.S.C. 1001 apply to any certification, assurance, or submission made in connection with a Federal public transportation program authorized in 49 U.S.C. chapter 53 or any other statute

In signing this document, I declare under penalties of perjury that the foregoing certifications and assurances, and any other statements made by me on behalf of the Applicant are true and correct.

Signature

Name

Authorized Representative of Applicant

Date:

AFFIRMATION OF APPLICANT'S ATTORNEY

For (Name of Applicant): TRANSPORTATION DISTRICT COMMISSION OF HAMPTON ROADS

As the undersigned Attorney for the above named Applicant, I hereby affirm to the Applicant that it has authority under State, local, or tribal government law, as applicable, to make and comply with the certifications and assurances as indicated on the foregoing pages. I further affirm that, in my opinion, the certifications and assurances have been legally made and constitute legal and binding obligations on the Applicant.

I further affirm to the Applicant that, to the best of my knowledge, there is no legislation or litigation pending or imminent that might adversely affect the validity of these certifications and assurances, or of the performance of the project.

Signature

Name

Attorney for Applicant

Date:

Each Applicant for FTA financial assistance and each FTA Grantee with an active capital or formula project must provide an Affirmation of Applicant's Attorney pertaining to the Applicant's legal capacity. The Applicant may enter its signature in lieu of the Attorney's signature, provided the Applicant has on file this Affirmation, signed by the attorney and dated this Federal fiscal year.

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**FINAL REPORT**



**FY 2010 TRIENNIAL REVIEW**

**of the**

**Transportation District Commission of Hampton Roads**

**d.b.a.**

**Hampton Roads Transit**

**(HRT)**

**Hampton, VA**

**Recipient ID: 1456**

**Desk Review: December 11-12, 2009**

**Site Visit: May 18-19, 2010**

**June 2010**

**Prepared for the  
Federal Transit Administration  
Region III  
Philadelphia, PA**

**by**

**Interactive Elements Incorporated**

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## **I. TRIENNIAL REVIEW BACKGROUND**

The United States Code, chapter 53 of title 49, requires the Federal Transit Administration (FTA) of the United States Department of Transportation (USDOT) to perform reviews and evaluations of Urbanized Area Formula Grant activities at least every three years. This requirement is contained in 49 U.S.C. 5307(i).

- (2) At least once every three years, the Secretary shall review and evaluate completely the performance of a recipient in carrying out the recipient's program, specifically referring to compliance with statutory and administrative requirements and the extent to which actual program activities are consistent with the activities proposed under subsection (d) of this section and the planning process required under sections 5303-5306 of this title.
- (3) The Secretary may take appropriate action consistent with the review, audit and evaluation under this subsection, including making an appropriate adjustment in the amount of a grant or withdrawing the grant.

The Triennial Review includes a review of the grantee's compliance in 24 areas. The basic requirements for each of these areas are summarized below.

This report presents the findings from the Triennial Review of Transportation District Commission of Hampton Roads, d.b.a. Hampton Roads Transit (HRT) of Hampton, VA. This review was performed in accordance with FTA procedures (published in FTA Order 9010.1B, April 5, 1993) and included preliminary reviews of documents on file at the Region III Office in Philadelphia and on-site discussions and review of the procedures, practices, and records of HRT as deemed necessary. The review concentrated primarily on procedures and practices employed during the past three years; however, coverage was extended to earlier periods as needed to assess the policies in place and the management of grants. During the site visit, administrative and statutory requirements were discussed, documents were reviewed, and facilities were toured. Specific documents examined during the Triennial Review are available in FTA's and HRT's files.

## **II. REVIEW PROCESS**

The desk review was conducted in the Region III Office on December 11-12, 2009. Following the desk review, a review package was sent to HRT advising it of the site visit and indicating additional information that would be needed and issues that would be discussed.

The site visit to HRT occurred on May 18-19, 2010. The individuals participating in the review are listed in Section VII of this report.

At the entrance conference, the purpose of the Triennial Review and the review process were discussed. During the site visit, administrative and statutory requirements were discussed and documents were reviewed. HRT's transit facilities were toured and [contractor/subrecipient] was visited to provide an overview of activities related to FTA-funded projects. A sample of maintenance records for FTA-funded vehicles was examined during the site visit.

Upon completion of the review, an exit conference was held with HRT staff to discuss findings, corrective actions and schedules. This information is summarized in the table in Section V of this report. A draft copy of this report was provided to HRT at the exit conference.

### **III. DESCRIPTION OF THE GRANTEE**

The Transportation District Commission of Hampton Roads, *d.b.a.* Hampton Roads (HRT), provides transit service in the Peninsula/Tidewater region of southeastern Virginia. HRT is a regional transportation provider created in 1999 through a merger of two separate transit commissions: the Peninsula Transportation District Commission and the Tidewater Transportation District Commission.

HRT directly operates 70 fixed-route bus service for the cities of: Chesapeake, Hampton, Newport News, Norfolk, Portsmouth, Virginia Beach, and Suffolk. The population of HRT's service area is approximately 1.4 million.

In addition, HRT provides seasonal service in Virginia Beach using replica trolleys as well as diesel-electric hybrid buses. Also, as part of the *TRAFFIX* program, a cooperative public service designed to promote regional transportation services, HRT provides FTA-funded vans for vanpooling.

All paratransit service is now operated by a contractor using HRT-owned and contractor-owned vehicles. HRT also sponsors a ferry service. The Portsmouth/Norfolk Ferry is operated by a contractor using HRT-owned vessels.

The basic adult fare for regular bus service is \$1.50. A reduced fare of \$.75 is offered to senior citizens, Medicare cardholders and persons with disabilities. The fare for ADA paratransit service, also known as Handi-Ride, is \$3.00. The adult fare for the seasonal replica trolley service is \$1.00, with a \$.50 fare for seniors, Medicare cardholders, and persons with disabilities.

HRT operates a fleet of 310 buses for fixed-route service. Its bus fleet consists of standard 30- to 40-foot transit coaches, rubber-tired trolleys, and diesel-electric hybrid buses. The current peak requirement is for 226 vehicles. HRT has a contingency fleet consisting of 38 vehicles. HRT also has a fleet of 200 vans and cutaways, which are operated by contractors for ADA paratransit and vanpool service. HRT's ferry operations use a fleet of three vessels.

HRT operates from multiple facilities located throughout the service area. These facilities include the following:

- Two administrative facilities located at 1500 Monticello Avenue, Norfolk, VA and 3400 Victoria Boulevard, Hampton, VA;
- Two bus garages located at 509 E. 18th Street, Norfolk, VA and 3400 Victoria Boulevard, Hampton, VA; (The Norfolk service is currently being operated from a temporary location at 2424 Springfield Avenue, Norfolk, VA) and
- Two transit centers located in Newport News, VA and Hampton, VA.

HRT's National Transit Database Report for FY 2009 provided the following financial and operating statistics for its fixed-route, paratransit, ferry and vanpool service:

	<b>Fixed-Route Service</b>	<b>Paratransit Service</b>	<b>Ferry Service</b>	<b>Van Pool Service</b>
Unlinked Passengers	14,994,774	267,162	331,252	165,066
Revenue Hours	870,940	175,976	5,814	26,367
Operating Expenses	\$61,742,512	\$7,788,010	\$912,179	\$515,988

Within the last three years, HRT completed the Advanced Communication System (ACS) project. The ACS was designed to provide transit buses with the ability to communicate their location at all times to the home locations. This system design has improved the quality, timeliness, and availability of customer information.

LRT (Tide) – is currently under construction. It will extend 7.4 miles from Eastern Virginia Medical Center through downtown Norfolk, continuing along the Norfolk Southern right-of-way, adjacent to I-264, to Newtown Road. Eleven stations will be constructed along the route with four park and ride locations that provide access to major areas such as Norfolk State University, Tidewater Community College(Norfolk Campus), Harbor Park, City Hall, MacArthur Center, and the Sentara Norfolk General Hospital.

Virginia Beach Transit Extension Study - Hampton Roads Transit has hired HDR Engineering, Inc. to provide services for the study of two potential extensions to the Tide (LRT system). The first extension currently under study is a potential fixed guideway connection from the eastern end of the Tide in Norfolk at Newtown Road to the Virginia Beach Oceanfront along the Norfolk Southern Corporation's right-of-way. The second segment, which will be studied at a later date, is a potential fixed guideway extension of the Tide to the Naval Station.

### ARRA Projects

Completed – Preventive maintenance on transit vehicles

Underway – SouthSide Maintenance Facility (including lease)  
Information and Management System  
Support Vehicles Acquisition  
Shop Equipment Acquisition  
Environmental Management Compliance  
Signal and Communication Equipment  
Transfer Center Upgrades (Miscellaneous Enhancements)

## **IV. RESULTS OF THE REVIEW**

The Triennial Review focused on HRT's compliance in 24 areas. This section provides a discussion of the basic requirements and findings in each area. No deficiencies were found with the FTA requirements in 20 of the 24 areas. Deficiencies were found in four areas: Technical, Deficiency Codes 02, 03, 12, 06; Maintenance, Deficiency Codes 04, 10; Procurement, Deficiency codes 13, 16, 06, 03, 99; and Title VI, Deficiency Code 10. Based upon the information HRT submitted and the corrective action taken, the following review areas were closed: Technical, Deficiency Code 06 and the Title VI finding Code 10.

### **1. Legal**

Basic Requirement: The grantee must be eligible and authorized under state and local law to request, receive, and dispense FTA funds and to execute and administer FTA funded projects. The authority to take all necessary action and responsibility on behalf of the grantee must be properly delegated and executed.

Findings: During this Triennial Review of HRT, no deficiencies were found with the FTA requirements for legal.

### **2. Financial**

Basic Requirement: The grantee must demonstrate the ability to match and manage FTA grant funds, cover cost increases and operating deficits, financially maintain and operate FTA funded facilities and equipment, and conduct and respond to applicable audits.

Findings: During this Triennial Review of HRT, no deficiencies were found with the FTA requirements for financial.

### 3. Technical

Basic Requirement: The grantee must be able to implement the FTA-funded projects in accordance with the grant application, Master Agreement, and all applicable laws and regulations, using sound management practices.

Findings: During this Triennial Review of HRT, deficiencies were found with the FTA requirements for technical.

A review of the FTA TEAM system found a significant number of Milestone Progress Reports that were late and did not meet the requirements of FTA Circular 5010.1D. This triennial review report will not address the late reports for projects that have since been closed. The active projects with late milestone progress reports are as follows:

- For project number VA-90-304-01, the MPRs were late for the 3<sup>rd</sup> quarter 2008 and 2<sup>nd</sup> quarter 2009.
- For project number VA-90-X320, the MPRS were late for 3<sup>rd</sup> quarter 2008 and 2<sup>nd</sup> quarter 2009.
- MPRs were late for project number VA-90-320-00 for the 3<sup>rd</sup> quarter 2008 and 2<sup>nd</sup> quarter 2009.

Follow-up discussions with the HRT staff indicated that the occurrence of late MPRs took place during a time of transition in HRT's grants management procedures and staff.

Many of the Milestone Progress Reports lack required information as specified in FTA Circular 5010.1D. For example, reports lack a description of the projects such as VA-90X320. The line item is for an ITS regional bus program, however, there is no description of the project. There are several grants with revised schedule dates and the narrative did not provide enough detail to explain why the schedule was not met or if it had any affect on the budget. One example is for Project Number VA-03-017-04 for the Norfolk Light Rail Transit Project. The original estimated completion date for line item 14000-140220 was 12/31/2009. This was changed to 9/30/2011. The narrative did not provide a discussion of the budget. The narrative made note that funds were added but did not provide an explanation as to the amount of funds added, why, or where the funds came from. Also, for this MPR as in others, HRT states that further details would be provided to FTA during the quarterly PMO meetings. TEAM is FTA's official document of record. Although details of a project may be provided at PMO quarterly meetings, the details of the grant must be reported in TEAM. The MPRs did not provide discussion of potential and executed change orders in amounts exceeding \$100,000, pending or settled during the reporting period. The HRT Norfolk Light Rail Transit Project Construction Change Order Log, dated 5/18/2010, shows at least three change orders including Contract Package 40, 60, and 80 where change orders are anticipated but not yet executed. The cumulative amount of the change orders is \$141,307, (\$88, 2,160), (\$112,300).

Federal Financial Reports are not reported correctly or in accordance with guidance provided by FTA in FTA Circular 5010.1D. Project number VA-95-X64 did not report the required information for FFR line item f. -- the federal share of unliquidated obligations. A



contract was awarded for replacement buses on 9/20/2008. The buses are to be delivered on 1/1/2011. Discussions with the financial and procurement office staff provided information that indicates the software system used for reporting grant related financial activities may not have the capabilities to provide the information required for TEAM on unliquidated obligations.

HRT does not have a force account plan for vehicle preventive maintenance performed by in-house staff that exceeds \$100,000 in a grant. Guidance provided by FTA in FTA Circular 5010.1D defines force account to include major capital project work on rolling stock such as preventive maintenance activities. The amount of funds for a project to be used to determine if the \$100,000 threshold for a force account plan has been met is not the total cost of the project but the cost of the project in a grant. The FY 2009 Formula Funds grant line item for preventive maintenance is \$13.5 million.

Corrective Action(s) and Schedule: By July 18, 2010, HRT should submit to the FTA Region III Office, the written procedures that HRT implemented to correct the late submission of Milestone Progress Reports. HRT should continue to submit the reports on time. The MPR for the next cycle should be reported on time, July 30, 2010.

By July 18, 2010, HRT should provide FTA Region III Office with written procedures on how the agency will meet FTA's grant management requirements to provide a detailed narrative report with a discussion of all budget or schedule changes, analysis of significant project cost variances, discussion of completion and acceptance of equipment together with a breakout of the costs incurred, a list of potential and executed change orders and amounts that exceed \$100,000 as found in FTA Circular 5010.1D. This area is also addressed in the Procurement Section of this report. In addition, it is recommended that HRT management consider having staff attend various FTA and FTA sponsored courses such as the FTA Triennial Review Workshops offered each year by FTA in several locations and Procurement training offered by both FTA and the National Transit Institute.

By August 17, 2010, HRT should provide FTA Region III Office with written procedures for a financial reporting structure that will accommodate the information required by FTA 5010.1D for the Federal Financial Reports. Guidance to meet the FFR requirements may be found in FTA 5010.1D. For the next reporting cycle, July 30, 2010, HRT should report the unliquidated obligations correctly.

Prior to the issuance of the final triennial review report, HRT provided a force account plan and justification for the preventive maintenance workforce that satisfies the FTA requirements found in 5010.1D. This finding is now closed.

#### **4. Satisfactory Continuing Control**

Basic Requirement: The grantee must maintain control over real property, facilities, and equipment and ensure that they are used in transit service.

Findings: During this Triennial Review of, no deficiencies were found with the FTA requirements for satisfactory continuing control.

## **5. Maintenance**

Basic Requirement: Grantees and their subrecipients must keep Federally funded equipment and facilities in good operating order and maintain ADA accessibility features.

Findings: During this Triennial Review of, deficiencies were found with the FTA requirements for maintenance.

The HRT preventive maintenance plan calls for PMs to be performed every 6,000 miles. Inspections that are no later than 10 percent of the schedule or 6,600 miles are considered on time. A review of 35 preventive maintenance records for five fixed route buses found 13 instances where the preventive maintenance was performed late. Only 63 percent of the PMs met the on-time performance standards established by FTA. In accordance with FTA guidance found in FTA Circular 5010.1D, PM inspections should be performed on-time by at least 80 percent. The reviewer observed possible issues that may have contributed to the delays in the PM inspections. First is the size of the facility where most of the preventive maintenance is being performed. This is a temporary facility, the "Old Ford" plant located at 2424 Springfield Avenue, Norfolk, VA. The buses are being maintained at this location until construction is completed at the 18<sup>th</sup> Street facility. The construction is scheduled to be completed in about 18 months. There are only three bays available for the preventive maintenance of 199 vehicles at the Old Ford plant facility. In reviewing the records, it was found that each vehicle requires a PM inspection on the average of once a month. In addition, there are difficulties in accurately tracking the vehicle mileage. The system used is somewhat antiquated and is vulnerable to human error. The preventive maintenance plan is solid and the shop has manuals and checklists for each type of vehicle. All plans and checklists meet FTA and ADA requirements.

The PM plan for the paratransit vehicles calls for the PM inspections to be performed every 3,000 miles. For the paratransit vehicles, a review of 39 records found 11 instances where the preventive maintenance inspections were performed late. Only 72 percent of the PMs were performed on time. FTA requires the preventive maintenance inspections to be performed on time at least 80 percent of the time. The paratransit service is performed by a contractor using HRT vehicles. The contractor is responsible for the preventive maintenance of the HRT vehicles. The HRT lacks monitoring and oversight control of the contractor's PM schedule and activities. This finding is also reported for procurement because of the lack of a contract administration system that assures that work is performed and carried out in accordance with the terms and conditions of the contract.

Corrective Action(s) and Schedule: By August 17, 2010, HRT should submit to the FTA Region III Office a plan for meeting FTA preventive maintenance requirements. It is recognized that the bulk of preventive maintenance will be moved to a new facility within about 18 months, however, HRT is responsible for the PM of the vehicles in the mean time and must have a plan to address manage its fleet during this time of transition.

By August 17, 2010, HRT should revise and submit to the FTA Region III Office, a fleet management plan that would include monitoring and oversight processes and procedures to be used by HRT staff to monitor the performance of preventive maintenance activities of contractors and sub-recipients to assure that they are meeting the terms and conditions of their contracts with regards to preventive maintenance.

## **6. Procurement**

**Basic Requirement:** FTA grantees use their own procurement procedures that reflect applicable state and local laws and regulations, provided that the process ensures competitive procurement and the procedures conform to applicable Federal law, including 49 CFR Part 18 (specifically Section 18.36) and FTA Circular 4220.1F, "Third Party Contracting Guidance."

**Findings:** During this Triennial Review of HRT, deficiencies were found with the FTA requirements for procurement.

HRT was unable to provide the certifications and clauses required for contracts more than \$2,000 for the Sole Source Procurement of On-Board Security Cameras. This contract was awarded for \$1,557,000. The clauses that were missing include, DBE, Suspension/Debarment and Lobbying.

On December 14, 2007, HRT issued a Purchase Order Number HRT01-0000047402 to purchase seven Low Floor Gillig buses. The piggy back purchase was made from a contract awarded by the Port Authority of Allegheny County on September 11, 2002. The HRT purchase order for the seven Low-Floor Gillig buses was awarded outside the five-year limitation period for the performance of the Port Authority contract. FTA Circular 4220.1F requires that grantees must not enter into contracts for rolling stock or replacement parts with a period of performance past five years.

Lost files and contractors that have not performed in accordance with the terms and conditions of their contracts add up to a contract administration system that is deficient. During the site visit, the reviewer reviewed preventive maintenance records for the complementary paratransit service and found preventive maintenance inspections were performed late. Only 72 percent of the PMs were performed on time. The paratransit service is performed by a contractor using HRT vehicles. The contractor is responsible for the preventive maintenance of the HRT vehicles. The HRT lacks a contract administration system that allows monitoring and oversight control of the contractor's PM schedule and activities. The lack of contract administration is also apparent in that HRT was unable to find the contract files for LR-46416 a small purchase for the Temporary Rail Spur awarded August 18, 2009, for \$48,750. HRT was also unable to provide the complete contract file for contract number 08-08001, a piggyback contract purchase order HRTT010000047402, valued at \$5,550,000. FTA Circular 4220.1F requires grantees to maintain a contract administration system. This requirement ensures that contractors perform in accordance with the terms, conditions, and specifications of their contracts or purchase orders. For piggy back contracts, grantees should maintain files that at a minimum contain a copy of the



original contract and the solicitation document; including the specifications and any Buy America Pre-award or Post-Delivery audits; an “assignability” clause; “certifications” required by Federal regulations; clauses required by Federal regulations; and verification that piggybacking quantities were included in the original solicitation, i.e., were they in the original bid and were they evaluated as part of the contract award decision. At the contract administration level, grantees should have written documentation and files that stand alone and without need of interpretation or augmentation of the contract administrator or other staff element.

During the site visit, the reviewer held discussions with procurement and other staff regarding contract change orders. The reviewer also assessed contract change order logs and reports and found that although all change orders had proper authorization and had been signed by the CEO, the review of early logs found that the full impact of the cost of change orders may not have been disclosed until the change orders were ready for approval. The process has recently been recently augmented with reports, reviews and sign-offs early in the process. Reporting of pending or settled contract change orders is also discussed in the Technical Area of this report. The MPRs did not provide discussion of potential and executed change orders in amounts exceeding \$100,000, pending or settled during the reporting period.

Corrective Action(s) and Schedule: By August 17, 2010, HRT must submit to FTA procurement procedures that assure all FTA required third-party contract clauses are included in HRT procurements as required by FTA 4220.1F. HRT’s current Procurement Manual is voluminous; more than 400 pages, complicated and difficult to follow with regards to FTA requirements. HRT should revise its procurement manual in order to simplify and include examples of FTA clauses and their uses that may be found on the FTA web in the FTA Triennial Review Workshop Workbook for 2010.

By August 17, 2010, HRT must submit to FTA Region III revised procurement procedures that include references to the FTA 4220.1F five-year restriction on the period of performance of rolling stock and replacement part contracts supported with FTA funds. An example of a “Piggyback Worksheet” may be found in the Procurement Best Practices Manual on the FTA web.

By August 17, 2010, HRT must develop and submit to FTA Region III a contract administration structure with standard operating procedures or checklists for contracts, files and procurement documents that assure that HRT staff has the tools to assure that contractors perform in accordance with the terms and conditions of their contracts. HRT contract administration should include a standard file checklist that will ensure that required documentation is present and the file is well organized and updated. Monitoring and oversight processes and procedures should be made a part of the standard operating procedures to ensure that contractors perform in accordance with the terms and conditions of the contract. Guidance may be found in FTA Circular 5010.1F.

By August 17, 2010, HRT must develop and submit to FTA Region III a reporting structure for contract change orders that incorporates the review process that was recently put in

place by HRT. The process should be formalized and include a process to bring mitigating factors to the attention of the CEO and FTA.

#### **7. Disadvantaged Business Enterprise (DBE)**

Basic Requirement: The grantee must comply with 49 CFR Part 26 to ensure nondiscrimination in the award and administration of DOT-assisted contracts. Grantees also must create a level playing field on which DBEs can compete fairly for DOT-assisted contracts.

Findings: During this Triennial Review of HRT, no deficiencies were found with USDOT requirements for DBE.

#### **8. Buy America**

Basic Requirement: Federal funds may not be obligated unless steel, iron, and manufactured products used in FTA funded projects are produced in the United States. The only exceptions are if FTA has granted a waiver or if the product is subject to a general waiver. Rolling stock must have sixty percent domestic content. Also, final assembly of rolling stock must take place in the United States and grantees must conduct a pre-award and post-delivery audit for purchases of rolling stock in order to verify that the 60 percent domestic content and final assembly requirements were met.

Findings: During this Triennial Review of HRT, no deficiencies were found with the FTA requirements for Buy America.

#### **9. Debarment and Suspension**

Basic Requirement: To protect the public interest from and prevent fraud, waste, and abuse in Federal transactions, persons or entities, which by defined events or behavior, that potentially threaten the integrity of federally administered non-procurement programs, are excluded from participating in FTA assisted programs.

Findings: During this Triennial Review of HRT, no deficiencies were found with the FTA requirements for debarment and suspension.

#### **10. Lobbying**

Basic Requirement: Recipients of Federal grants and contracts exceeding \$100,000 must certify compliance with Restrictions on Lobbying before they can receive funds.

Findings: During this Triennial Review of HRT, no deficiencies were found with the FTA requirements for lobbying.

## **11. Planning/Program of Projects**

Basic Requirement: The grantee must participate in the transportation planning process in accordance with FTA requirements, SAFETEA-LU, and the metropolitan and statewide planning regulations.

Grantees must develop and/or participate in a locally developed, coordinated public transit-human services transportation plan that identifies the transportation needs of individuals with disabilities, older adults, and people with low incomes, provides strategies for meeting those local needs, and prioritizes transportation services for funding and implementation.

Each recipient of a Section 5307 grant shall have complied with the public participation requirements of Section 5307(c)(1) through (7). Each grantee is required to develop, publish, afford an opportunity for a public hearing on, and submit for approval a Program of Projects (POP).

Findings: During this Triennial Review of HRT, no deficiencies were found with the FTA requirements for planning/POP.

## **12. Title VI**

Basic Requirement: The grantee must ensure that no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participating in, be denied the benefits of, or be subject to discrimination under any program or activity receiving Federal financial assistance. The grantee must ensure that federally supported transit services and related benefits are distributed in an equitable manner.

Findings: During this Triennial Review of HRT, deficiencies were found with the FTA requirements for Title VI.

FTA requires grantees to provide information to the public regarding their Title VI obligations and apprise members of the public of the protections against discrimination afforded to them by Title VI. HRT's only means of dissemination of the Title VI public notification is on its website.

Corrective Action(s) and Schedule: Prior to the issuance of the final triennial review report, HRT submitted documentation that verified additional information had been developed posted, and disseminated to provide notification to the public of its rights under Title VI. This finding is now closed.

### **13. Fare Increases and Major Service Reductions**

Basic Requirement: Section 5307 grantees are expected to have a written locally developed process for soliciting and considering public comment before raising a fare or carrying out a major transportation service reduction.

Findings: During this Triennial Review of HRT, no deficiencies were found with the FTA requirements for fare increases and service reductions.

### **14. Half Fare**

Basic Requirement: During non-peak hours for fixed route service supported with Section 5307 assistance, fares charged elderly persons, persons with disabilities or an individual presenting a Medicare card will not be more than half the peak hour fare.

Findings: During this Triennial Review of HRT, no deficiencies were found with the FTA requirements for half fare.

### **15. ADA**

Basic Requirement: Titles II and III of the Americans with Disabilities Act of 1990 provide that no entity shall discriminate against an individual with a disability in connection with the provision of transportation service. The law sets forth specific requirements for vehicle and facility accessibility and the provision of service, including complementary paratransit service.

Findings: During this Triennial Review of HRT, no deficiencies were found with the FTA requirements for ADA.

### **16. Charter Bus**

Basic Requirement: FTA grantees are prohibited from using Federally funded equipment and facilities to provide charter service if a registered private charter operator expresses interest in providing the service. Grantees are allowed to operate community based charter services excepted under the regulations.

Findings: During this Triennial Review of HRT, no deficiencies were found with the FTA requirements for charter bus.

## **17. School Bus**

**Basic Requirement:** Grantees are prohibited from providing exclusive school bus service unless the service qualifies and is approved by the FTA Administrator under an allowable exemption. Federally funded equipment or facilities cannot be used to provide exclusive school bus service. School tripper service that operates and looks like all other regular service is allowed.

**Findings:** During this Triennial Review of HRT, no deficiencies were found with the FTA requirements for school bus.

## **18. National Transit Database (NTD)**

**Basic Requirement:** Grantees that receive 5307 and 5311 grant funds must collect, record, and report financial and non-financial data in accordance with the Uniform System of Accounts (USOA) and the *National Transit Database (NTD) Reporting Manual* as required by 49 USC 5335(a).

**Findings:** During this Triennial Review of HRT, no deficiencies were found with the FTA requirements for National Transit Database.

## **19. Safety and Security**

**Basic Requirement:** Any recipient of Urbanized Area Formula Grant Program funds must annually certify that it is spending at least one percent of such funds for transit security projects or that such expenditures for security systems are not necessary.

Under the safety authority provisions of the Federal transit laws, the Secretary has the authority to investigate the operations of the grantee for any conditions that appear to create a serious hazard of death or injury, especially to patrons of the transit service. States are required to oversee the safety of rail fixed guideway systems through a designated oversight agency, per 49 CFR Part 659, Rail Fixed Guideway Systems, State Safety Oversight. FTA has developed web sites for Bus Safety and Rail Safety. These sites include helpful tools, such as resources, self assessments, and forums.

Under security, a list of 17 Security and Emergency Management Action Items has been developed by FTA and the Department of Homeland Security's Transportation Security Administration (TSA). This list of 17 items, an update to the original FTA Top 20 security action items list, was developed in consultation with the public transportation industry through the Mass Transit Sector Coordinating Council, for which the American Public Transportation Association (APTA) serves as Executive Chair. Security and Emergency Management Action Items for Transit Agencies aim to elevate security readiness throughout the public transportation industry

by establishing baseline measures that transit agencies should employ. Additionally, FTA has developed an extensive website for transit security.

The goal of FTA's Safety and Security Program is to achieve the highest practical level of safety and security in all modes of transit. To this end, FTA continuously promotes the awareness of safety and security throughout the transit community by establishing programs to collect and disseminate information on safety/security concepts and practices. In addition, FTA develops guidelines that transit systems can apply in the design of their procedures and by which to compare local actions. Many of the questions in this review area are designed to determine what efforts grantees have made to develop and implement safety, security, and emergency management plans. While there may not be specific requirements associated with all of the questions, grantees are encouraged to implement the plans, procedures, and programs referenced in these questions. For this reason, findings in this area will most often result in advisory comments rather than deficiencies.

Findings: A summary of HRT's expenditures of Section 5307 funds for security projects is provided in Section VI of this report.

During this Triennial Review of HRT, no deficiencies were found with the FTA requirements for safety and security.

## **20. Drug-Free Workplace**

Basic Requirement: FTA grantees are required to maintain a drug-free workplace for all employees and to have an ongoing drug-free awareness program.

Findings: During this Triennial Review of HRT, no deficiencies were found with the FTA requirements for drug-free workplace.

## **21. Drug and Alcohol Program**

Basic Requirement: Grantees receiving Urbanized Area Formula Program (Section 5307), Non-Urbanized Area Formula Program (Section 5311), or Capital Investment Program (Section 5309) funds must have a drug and alcohol testing program in place for all safety-sensitive employees.

Findings: During this Triennial Review of HRT, no deficiencies were found with the FTA requirements for the drug and alcohol program.



## **22. Equal Employment Opportunity (EEO)**

**Basic Requirement:** The grantee must ensure that no person in the United States shall on the grounds of race, color, religion, national origin, sex, age, or disability be excluded from participating in, or denied the benefits of, or be subject to discrimination in employment under any project, program, or activity receiving Federal financial assistance from the Federal transit laws. (Note: EEOC's regulation only identifies/recognizes religion and not creed as one of the protected groups.)

**Findings:** During this Triennial Review of HRT, no deficiencies were found with the FTA requirements for EEO.

## **23. ITS Architecture**

**Basic Requirement:** Intelligent Transportation Systems (ITS) projects funded by the Highway Trust Fund and the Mass Transit Account must conform to the National ITS Architecture, as well as to United States Department of Transportation (USDOT) adopted ITS Standards.

**Findings:** During this Triennial Review of HRT, no deficiencies were found with the FTA requirements for ITS architecture.

## **24. American Recovery and Reinvestment Act (ARRA)**

**Basic Requirement:** Grantees must have the legal, financial and technical capacity to carry out the proposed program of projects and meet the additional reporting requirements for its ARRA-funded grant activities.

**Findings:** HRT has three active ARRA grants. Projects funded by that/those grants are:

1. VA 96 X003: \$24,096,312.00: Awarded 8/20/2009

Southside Maintenance Facility Construction (including lease) \$14,000,000

Information and Management System \$ 400,000

Support Vehicles - Acquisition \$2,100,000

Shop Equipment - Acquisition \$2,500,000

HQ Bus Wash Facility \$336,312

Environmental Management Compliance \$550,370

Transfer Center Upgrades - NNTC/HTC \$1,419,037

Signal and communication equipment \$140,000

Miscellaneous Enhancements (Transfer center upgrade improvements) \$240,963

Operating Assistance \$2,409,630

2. VA-56-0001: \$437,148 Awarded 7/31/2009; Funded Preventive Maintenance on the transit vehicles.
3. VA-66-X002; \$1 million, Awarded 2/26/2010; Funded preventive maintenance on transit vehicles.

During this Triennial Review of HRT, no deficiencies were found with the FTA requirements for ARRA.



## V. SUMMARY OF FINDINGS AND CORRECTIVE ACTIONS

Review Area	Finding	Deficiency	Corrective Action	Response Date	Date Closed
1. Legal	ND				
2. Financial	ND				
3. Technical	D	02 – Late MPRs/FSRs	HRT should submit to the FTA Region III Office, the written procedures that HRT implemented to correct the late submission of Milestone Progress Reports.	July 18, 2010	
		03 – Progress reports lack required information	HRT should provide FTA Region III Office with written procedures on how the agency will meet FTA's grant management requirements found in FTA Circular 5010.1D.	July 18, 2010	
		12 – Incorrect FFR reporting	HRT will develop and provide to FTA Region III a program management plan that will provide instructions on how the agency will meet the federal requirements for Federal Financial Reports including how the agency will report unliquidated obligations in FFR line item f. Report unliquidated obligations next cycle July 30, 2010.	August, 17, 2010	
		06 – Lacking force account plan/justification	Provide FTA Region III with force account plan or justification for maintenance workforce.	Closed	
304. Satisfactory Continuing Control	ND				
5. Maintenance	D	04 – Late vehicle preventive maintenance	HRT should submit to the FTA Region III Office a plan for meeting FTA preventive maintenance requirements.	August 17, 2010	
		10 – Inadequate oversight of contracted maintenance activities	HRT must develop an oversight program that may be used by HRT staff to monitor contractor performance of preventive maintenance activities. Submit the oversight plan to FTA Region III Office.	August 17, 2010	

Review Area	Finding	Deficiency	Corrective Action	Response Date	Date Closed
6. Procurement	D	13-missing DBE, Debarment/Suspension/ and Lobbying clauses.	Revise procurement procedures to assure FTA clauses and certifications are included. Submit the revised procurement procedures to FTA Region III Office.	August 17, 2010	
		16-Exceed five year limitation of bus procurement	Revise and simplify procurement procedures to assure all contract requirements have been met for piggyback including five year limits on contracts for rolling stock. Submit the revised procurement procedures to the FTA Region III office	August 17, 2010	
		03 – No contract administration system	HRT must revise its procurement processes and procedures to assure contract administration requirements found in FTA 4220.1f are met. HRT is to submit the revised processes and procedures to FTA Region III Office.	August 17, 2010	
		99-Lack written procedures for early review of contract change orders.	Develop reporting structure and augment and formalize signature authority.	August 17, 2010	
7. Disadvantaged Business Enterprise	ND				
8. Buy America	ND				
9. Debarment and Suspension	ND				
10. Lobbying	ND				
11. Planning/POP	ND				
12. Title VI	D	10—Title VI public notification deficiencies.	HRT must submit to the FTA Region III Office documentation to verify that it has developed and disseminated a notification to the public of its rights under Title VI	Closed	
13. Fare Increases and Service Reductions	ND				
14. Half Fare	ND				
15. ADA	ND				
16. Charter Bus	ND				
17. School Bus	ND				

Review Area	Finding	Deficiency	Corrective Action	Response Date	Date Closed
18. National Transit Database	ND				
19. Safety and Security	ND				
20. Drug-Free Workplace	ND				
21. Drug and Alcohol Program	ND				
22. Equal Employment Opportunity	ND				
23. ITS Architecture	ND				
24. ARRA	ND				

Findings: ND = No Deficiencies; D = Deficient; AC = Advisory Comment; NA = Not Applicable

## VI. TRANSIT SECURITY EXPENDITURES

Does the grantee expend one percent or more of its Section 5307 Urbanized Area Formula Grant funds for transit security?

FY2007:	Yes:	x	No:	
FY2008:	Yes:		No:	x
FY2009:	Yes:		No:	x

If no, why does the grantee consider such expenditure unnecessary (check all that apply):

	No deficiency found from a threat and vulnerability assessment
	TSA/FTA Security and Emergency Management Action Items met or exceeded
x	Other: HRT received other funds that augmented the list below.

Security Funding	FTA Section 5307 Funds (in Dollars)		
	FY 2007	FY 2008	FY 2009
Total amount of 5307 Funds expended	20,243,465	29,290,056	24,164,517
Amount of 5307 Funds expended on security	211,965	157,984	224,706
Percent of 5307 Funds expended on security	1.05 %	0.54%	.93%
<b>Infrastructure/Capital Improvement Security Projects:</b>			
Lighting, Fencing & Perimeter Control			
CCTV and Surveillance Technology	185,597	151,947	222,741
Communications Systems			
Security Planning			
Drills & Tabletop Exercises			
Employee Security Training			
Other Security-Related Infrastructure & Capital Improvements (please list): Security Police Equipment, Locks, and Card Access Equipment	26,386	5,937	1,965
<b>Operating/Personnel Expenditures (can only be used by agencies in areas with populations UNDER 200,000):</b>			
Contracted Security Force			
In-house Security Force			
Other Security-Related Operating Expenditures (please list): _____			

## VII. ATTENDEES

Name	Title/Organization	Phone Number	E-mail Address
<b>Grantee</b>			
Barry Herring	Chief Accounting Officer	757-222-6000	bherring@hrtransit.org
David Stoecker	Director Risk Management	757-222-6000	dstoecker@hrtransit.org
Keisha Branch	Chief Grants Officer	757-222-6000	kbranch@hrtransit.org
Hien Hoang	Director of Accounting	757-222-6000	hhoang@hrtransit.org
Sharon Foster	DBE Program Manager	757-222-6000	sfoster@hrtransit.org
Al Rollins	Director of Fleet Maintenance	757-222-6000	arollins@hrtransit.org
Patricia Williams	Paratransit Specialist	757-222-6000	pawilliams@hrtransit.org
Homer Carter	SVP Bus & Rail Operations	757-222-6000	hcarter@hrtransit.org
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Philip Shucet	President/CEO	757-222-6159	pshucet@hrtransit.org
<b>FTA</b>			
Katherine Berrillo	Regional Engineer	215-656-7100	Katherine.berrillo@dot.org
<b>Reviewer</b>			
Kay Luongo	Reviewer	239-961-9680	kxl@ieitransit.com

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Budget and Audit Committee  
Transportation District Commission of Hampton Roads

We have audited the financial statements of the Transportation District Commission of Hampton Roads (Commission) for the year ended June 30, 2009, and have issued our report thereon. Professional standards require that we provide you with the following information related to our audit.

Our Responsibility under U.S. Generally Accepted Auditing Standards and OMB Circular A-133

As stated in our engagement letter dated May 26, 2009, our responsibility, as described by professional standards, is to express an opinion about whether the financial statements prepared by management with your oversight are fairly presented, in all material respects, in conformity with U.S. generally accepted accounting principles. Our audit of the financial statements does not relieve you or management of your responsibilities.

In planning and performing our audit, we considered the Commission's internal control over financial reporting in order to determine our auditing procedures for the purpose of expressing our opinion on the consolidated financial statements and not to provide assurance on the internal control over financial reporting. We also considered internal control over compliance with requirements that could have a direct and material effect on a major federal program in order to determine our auditing procedures for the purpose of expressing our opinion on compliance and to test and report on internal control over compliance in accordance with OMB Circular A-133.

As part of obtaining reasonable assurance about whether the Commission's consolidated financial statements are free of material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts and grants, noncompliance with which could have a direct and material effect on the determination of consolidated financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit. Also, in accordance with OMB Circular A-133, we examined, on a test basis, evidence about the Commission's compliance with the types of compliance requirements described in the *U.S. Office of Management and Budget (OMB) Circular A-133 Compliance Supplement* applicable to each of its major federal programs for the purpose of expressing an opinion on the Commission's compliance with those requirements. While our audit provides a reasonable basis for our opinion, it does not provide a legal determination on the Commission's compliance with those requirements.

Significant Audit Findings

*Qualitative Aspects of Accounting Practices*

Management is responsible for the selection and use of appropriate accounting policies. In accordance with the terms of our engagement letter, we will advise management about the appropriateness of accounting policies and their application. The significant accounting policies used by the Commission are described in Note 2 to the financial statements. No new accounting policies were adopted and the application of existing policies was not changed during 2009. We noted no transactions entered into by the Commission during the year for which there is a lack of authoritative guidance or consensus. There are no significant transactions that have been recognized in the financial statements in a different period than when the transaction occurred.

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Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates may be particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected. The most sensitive estimate affecting the consolidated financial statements was management's estimate of the self-insurance liability and the funded reserves. We evaluated the key factors and assumptions used to develop the self-insurance liability and the funded reserves in determining that it is reasonable in relation to the consolidated financial statements taken as a whole.

#### *Difficulties Encountered in Performing the Audit*

We encountered no difficulties in dealing with management in performing and completing our audit.

#### *Corrected and Uncorrected Misstatements*

Professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those that are trivial, and communicate them to the appropriate level of management. In our judgment, none of the adjustments we proposed, whether recorded or unrecorded by the Commission either individually or in the aggregate indicate matters that could have significant effect on the Commission's financial reporting process.

#### *Disagreements with Management*

For purposes of this letter, professional standards define a disagreement with management as a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditor's report. We are pleased to report no such disagreements arose during the course of our audit.

#### *Management Representations*

We have requested certain representations from management that are included in their management representation letter to us.

#### *Management Consultations with Other Independent Accountants*

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves application of an accounting principle to the Commission's financial statements or a determination of the type of auditor's opinion that may be expressed on those statements, our professional standards require the consulting accountant check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

#### *Other Audit Findings or Issues*

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as the Commission's auditors. However, these discussions occur in the normal course of our professional relationship and our responses were not a condition to our retention.



This information is intended solely for the use of the Budget and Audit Committee and management of Transportation District Commission of Hampton Roads and is not intended to be and should not be used by anyone other than these specified parties.

*Goodman & Company Z.T.P.*

Newport News, Virginia  
December 8, 2009



Certified Public Accountants  
Specialized Services  
Business Solutions

Audit Committee  
Transportation District Commission of Hampton Roads

In planning and performing our audit of the financial statements of the Transportation District Commission of Hampton Roads (Commission) as of and for the year ended June 30, 2009, in accordance with auditing standards generally accepted in the United States of America, *Government Auditing Standards*, we considered the Commission's internal control over financial reporting (internal control) as a basis for designing our auditing procedures for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Commission's internal control. Accordingly, we do not express an opinion on the effectiveness of the Commission's internal control.

However, during our audit we became aware of the following matters. These circumstances and the possible solutions have been reviewed with the President and Chief Executive Officer, Senior Vice President for Finance, and Chief Accounting Officer, and we believe they present an opportunity to strengthen internal controls and improve operating efficiency.

**Money Room Cash Reconciliation**

In connection with our audit, it came to our attention that there was a discovery of fraud involving the money room from the Southside location. The GFI receivers that were located at the Trolley Base Facility that were transported to the money room were not analyzed with GFI reports on a consistent basis. As a result, it was noted by the Commission's staff that cash was being taken over a period of six months. The total amount of cash that was taken approximated \$80,000. While the Commission has strengthened procedures after the fraud was discovered, we recommend that these procedures be continually updated and the money room cash is analyzed with GFI reports on a daily basis.

This communication is intended solely for the information and use of the management of the Transportation District Commission of Hampton Roads and is not intended to be and should not be used by anyone other than these specified parties.

*Goodman & Company F.T.P.*

Newport News, Virginia  
December 8, 2009



Certified Public Accountants  
Specialized Services  
Business Solutions

Board of Commissioners  
Transportation District Commission of Hampton Roads

We have audited the financial statements of *Transportation District Commission of Hampton Roads* for the year ended June 30, 2010. Professional standards require that we provide you with information about our responsibilities under generally accepted auditing standards and Government Auditing Standards and OMB Circular A-133, as well as certain information related to the planned scope and timing of our audit. We have communicated such information in our engagement letter dated September 22, 2010. Professional standards also require that we communicate to you the following information related to our audit.

### Significant Audit Findings

#### *Qualitative Aspects of Accounting Practices*

Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used by *Transportation District Commission of Hampton Roads* are described in Note 2 to the financial statements. No new accounting policies were adopted and the application of existing policies was not changed during 2010. We noted no transactions entered into by the Authority during the year for which there is a lack of authoritative guidance or consensus. All significant transactions have been recognized in the financial statements in the proper period.

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected.

The most sensitive estimate affecting the Commission's financial statements relates to the estimated liability for self-insurance claims. Management accrues an amount for self-insurance claims based on responses from its attorneys and evaluation of each case. We evaluated the factors and assumptions used to develop these estimates in determining that it is reasonable in relation to the financial statements taken as a whole.

The disclosures in the financial statements are neutral, consistent, and clear. Certain financial statement disclosures are particularly sensitive because of their significance to financial statement users. The most sensitive disclosures affecting the financial statements were the disclosures concerning debt balances and terms.

#### *Difficulties Encountered in Performing the Audit*

We encountered no significant difficulties in dealing with management in performing and completing our audit.

*Corrected and Uncorrected Misstatements*

Professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those that are trivial, and communicate them to the appropriate level of management. Management has corrected all such misstatements. None of the misstatements detected as a result of audit procedures and corrected by management were material, either individually or in the aggregate, to the financial statements taken as a whole.

*Disagreements with Management*

For purposes of this letter, professional standards define a disagreement with management as a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditor's report. We are pleased to report that no such disagreements arose during the course of our audit.

*Management Representations*

We have requested certain representations from management that are included in the management representation letter dated December 8, 2010.


*Management Consultations with Other Independent Accountants*

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves application of an accounting principle to the Authority's financial statements or a determination of the type of auditor's opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

*Other Audit Findings or Issues*

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as the Commission's auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our retention.

This information is intended solely for the use of the Board of Directors and management of *Transportation District Commission of Hampton Roads* and is not intended to be and should not be used by anyone other than these specified parties.



Newport News, Virginia  
December 8, 2010





Certified Public Accountants  
Specialized Services  
Business Solutions

Audit Committee  
Transportation District Commission of Hampton Roads

In planning and performing our audit of the financial statements of the Transportation District Commission of Hampton Roads (Commission) as of and for the year ended June 30, 2010, in accordance with auditing standards generally accepted in the United States of America and *Government Auditing Standards*, we considered the Commission's internal control over financial reporting (internal control) as a basis for designing our auditing procedures for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Commission's internal control. Accordingly, we do not express an opinion on the effectiveness of the Commission's internal control.

However, during our audit we became aware of the following matters. These circumstances and the possible solutions have been reviewed with the Chief Accounting Officer, and we believe they present an opportunity to strengthen internal controls and improve operating efficiency.

#### **Posting of Cash Receipts to PeopleSoft**

In connection with our audit, it was noted that posting of cash receipts to the general ledger was not performed in a timely manner. The cash receipts were deposited in the bank in a timely manner but the general ledger was not updated until several days later. This issue leaves the potential for cash to be understated in the general ledger and possibly accounts receivable overstated. While some personnel issues caused delays in the posting process, it is recommended that this process is delegated to appropriate staff to handle.

#### **Procurement Search for Suspension and Disbarment**

In connection with our audit of A-133 compliance testing for federal grants, it was noted the search for excluded parties for suspension and disbarment in connection with awarding contracts was not routinely performed. In addition, when the search was performed, the documentation was not maintained with contract documents. Not performing a search for excluded parties leaves the potential of awarding contracts to vendors that may have been disbarred or suspended from conducting business in Virginia. This would be a direct violation of federal grant awards and could potentially reduce funding. It is recommended that all contract award documentation include the search for excluded parties report.

This communication is intended solely for the information and use of the management of the Transportation District Commission of Hampton Roads and is not intended to be and should not be used by anyone other than these specified parties.

Newport News, Virginia  
December 8, 2010

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Newport News, VA 23606

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**DIXON HUGHES GOODMAN** LLP  
Certified Public Accountants and Advisors

Board of Commissioners  
Transportation District Commission of Hampton Roads

We have audited the financial statements of *Transportation District Commission of Hampton Roads* for the year ended June 30, 2011. Professional standards require that we provide you with information about our responsibilities under generally accepted auditing standards and Government Auditing Standards and OMB Circular A-133, as well as certain information related to the planned scope and timing of our audit. We have communicated such information in our engagement letter dated July 13, 2011. Professional standards also require that we communicate to you the following information related to our audit.

Significant Audit Findings

*Qualitative Aspects of Accounting Practices*

Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used by *Transportation District Commission of Hampton Roads* are described in Note 2 to the financial statements. No new accounting policies were adopted and the application of existing policies was not changed during 2011. We noted no transactions entered into by the Authority during the year for which there is a lack of authoritative guidance or consensus. All significant transactions have been recognized in the financial statements in the proper period.

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected.

The most sensitive estimate affecting the Commission's financial statements relates to the estimated liability for self-insurance claims. Management accrues an amount for self-insurance claims based on responses from its attorneys and evaluation of each case. We evaluated the factors and assumptions used to develop these estimates in determining that it is reasonable in relation to the financial statements taken as a whole.

The disclosures in the financial statements are neutral, consistent, and clear. Certain financial statement disclosures are particularly sensitive because of their significance to financial statement users. The most sensitive disclosures affecting the financial statements were the disclosures concerning debt balances and terms.

*Difficulties Encountered in Performing the Audit*

We encountered no significant difficulties in dealing with management in performing and completing our audit.

### *Corrected and Uncorrected Misstatements*

Professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those that are trivial, and communicate them to the appropriate level of management. Management has corrected all such misstatements. The attached schedule summarizes uncorrected misstatements of the financial statements. Management has determined that their effects are immaterial, both individually and in the aggregate, to the financial statements taken as a whole.

### *Disagreements with Management*

For purposes of this letter, professional standards define a disagreement with management as a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditor's report. We are pleased to report that no such disagreements arose during the course of our audit.

### *Management Representations*

We have requested certain representations from management that are included in the management representation letter dated October 24, 2011.

### *Management Consultations with Other Independent Accountants*

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves application of an accounting principle to the Authority's financial statements or a determination of the type of auditor's opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

### *Issues Discussed Prior to Retention of Independent Auditors*

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as the Commission's auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our retention.

### *Other Comments*

Following are additional comments not required by professional standards. Nevertheless, we thought we would bring it to your attention.

During the testing of disposals of property and equipment, it was noted that two assets were sold for amounts greater than \$5,000. Per FTA regulations, any assets that were originally purchased with federal funds and subsequently sold for greater than \$5,000 in proceeds, then such must be remitted to the FTA. We recommend that someone review all sale amounts at auctions and any funds required to be returned to the FTA are done so promptly.



During our testing of cash and accounts payable, we noted that accounts were not reconciled timely to subsidiary ledgers, particularly cash and accounts payable. We noted several unexplained reconciling items on the reconciliations that were made in order to reconcile the subsidiary ledgers to the recorded trial balance. We believe that this represents a reportable condition in the Authority's internal control over account reconciliation. If accounts are not properly reconciled on a regular basis, internally generated statements could be misleading. We recommend that all account balances be reconciled to the recorded amounts in the general ledger on a regular basis and that this documentation is retained for easy retrieval.

This information is intended solely for the use of the Board of Directors and management of *Transportation District Commission of Hampton Roads* and is not intended to be and should not be used by anyone other than these specified parties.

*Dixon Hughes Goodman LLP*

Newport News, Virginia  
October 24, 2011

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## ASB-CX-12.2: Audit Difference Evaluation Form

Entity: Transportation District Commission of Hampton Roads

Balance Sheet Date:

June 30, 2011

Completed by:

Date:

14-Oct-10

**Instructions:** This form should be used to accumulate known audit differences detected by nonsampling substantive procedures (including differences in accounting estimates) and projected audit differences from substantive procedures that used sampling. All known and likely misstatements greater than the amount considered trivial (documented at **Step 5** of ASB-CX-2) should be listed. The auditor should review the guidance beginning at paragraph 1812.29 before concluding whether to reflect the effect of prior-year unadjusted audit differences in evaluating audit differences in the current period. This form should not include normal closing entries. At the end of the audit, the auditor should evaluate all uncorrected audit differences, individually and in the aggregate, in relation to individual amounts, subtotals, or totals in the financial statements and conclude on whether they materially misstate the financial statements taken as a whole. See Section 1812. The notes following the table provide a listing of qualitative considerations in evaluating materiality.

Description (Nature) of Audit Difference	Known (K) or Likely (L)	Cause	Workpaper Ref.	Financial Statements Effect—Amount of Over (Under) Statement of:						
				Total Assets	Total Liabilities	Working Capital	Equity	Income Before Taxes	Income Taxes	Net Income
Cash bank reconciliation does not agree to trial balance. Unreconciled difference noted.	(K)	Client could not reconcile amount on bank recon	A-01	\$152,758			\$152,758	\$152,758	\$0	\$152,758
Accounts payable differences	K	A/P not reconciled	M-03		\$75,543			-\$75,543	\$0	-\$75,543
A/P does not agree to G/L	L	Adjustment for voided check and grants payable was not adjusted on G/L	PY					\$73,459	\$0	\$73,459
Cash bank reconciliation does not agree to trial balance. Unreconciled difference noted.	K	Client could not reconcile amount on bank recon	PY					-\$59,788	\$0	-\$59,788
Self insurance per overstated when compared to support schedule	K	Client reconciled liability to G/L and detailed scheduled.	PY					-\$248,844	\$0	-\$248,844
Total				\$152,758	\$75,543	\$0	\$152,758	-\$157,958	\$0	-\$157,958
Less Audit Adjustments Subsequently Booked						\$0			\$0	
Net Unadjusted Audit Differences—This Year				\$152,758	\$75,543	\$0	\$152,758	-\$157,958	\$0	-\$157,958
Effect of Unadjusted Audit Differences—Prior Years									\$0	\$0
Total Audit Differences				\$152,758	\$75,543	\$0	\$152,758	-\$157,958	\$0	-\$157,958
Financial Statement Caption Totals				\$402,687,477	\$38,703,598		\$363,983,879	\$89,165,997	\$0	\$89,165,997
Audit Differences as % of F/S Captions				0.04%	0.20%	0.00%	0.04%	-0.18%	0.00%	-0.18%

**Conclusion:** Based on the results of the evaluation performed above, as well as the consideration of qualitative factors, uncorrected audit differences, individually and in the aggregate, cause the financial statements to be materially misstated.